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TABLE OF CONTENTS

A.	ORAL PRESENTATION.....	17
	The Role of Antenatal Care Quality in Preventing Maternal Mortality in Purwakarta, Indonesia	18
	Comprehensive Management of Severe Preeclampsia Cases in Primary Healthcare Facilities: Efforts to Optimize the Quality of Social Obstetric Care	19
	Early Adolescent Pregnancy with Syphilis: A Case Report Reflecting Multidimensional Risk, Structural Inequities and Gaps in Preventive Care in Indonesia: A Case Report.....	20
	Optimizing the Maternal and Child Health (MCH) Book for Family Planning Counseling in Kulon Progo Using the GATHER Method	21
	Analysis of Dominant Factors in Downstream Governance to Reduce Maternal Mortality in Type C Hospitals.....	22
	Hubungan antara Ratio Fibrinogen-Albumin terhadap Kejadian Abortus Imminens	23
	Between Hope and Risk: Pregnancy with Congenital Heart Disease and Poor Treatment Adherence	24
	Descriptive Analysis of SERVQUAL Satisfaction of BPJS Patients with Antenatal Care (ANC) Services at Bangil Regional Hospital, Pasuruan Regency	25
	Determinant Factors of Cervical Cancer Screening Among Indonesian Women: A Systematic Review and Meta-Analysis	26
	Sociocultural Barriers and Diagnostic Challenge in Unmarried Young Woman with Endometrial Tuberculosis.....	27
	Prevalence of Postpartum Hemorrhage and Associated Obstetric and Socio-Demographic Risk Factors in Indonesia: A Systematic Review and Meta-Analysis.....	28
	Comprehensive Multidimensional Analysis of Adolescent Pregnancy and ITS Determinants at RSUD Ulin Teaching and Referral Hospital: A mixed – Methods Study	29
	Anemia in Pregnancy at the Primary Care Level: A 2024 Retrospective Study	30
	Bahaya Tersembunyi Obstructive Sleep Apnea: Tinjauan Sistematis dan Meta-Analisis Dampak OSA pada Kehamilan serta Peran Penting Skrining Layanan Primer	31
	Analysis of Referral Patterns in Maternal Mortality Cases at Dr. Kariadi Hospital Semarang Period 2023-2024	32
	Kehamilan Remaja dengan Infeksi HIV: Pendekatan Holistik dan Kearifan Lokal dalam Penanganan dan Pencegahan Risiko Kesehatan	33
	Delayed Detection, Fatal Outcomes: A Case Of Fundal Uterine Rupture Remote from Prior Cesarean Section Scar with Severe Preeclampsia and IUFD As A Reflection of Social Obstetrics Implementation.....	34
	Concealed Adolescent Pregnancy Leading to Maternal Near Miss: A Case of Eclampsia with Placental Abruptio Intrauterine, Fetal Death and Multi-Organ Dysfunction as A Reflection of Social Stigma, Delay in Care and Health System Gaps	35

Fulminant Peripartum Cardiomyopathy Complicated by Sepsis and Multi-Organ Dysfunction: A Fatal Postpartum Case Rapidly Progressive Peripartum Cardiomyopathy with Concurrent Sepsis Leading to Fatal Outcome: A Case Report.....	36
Effectiveness of Obstetric Safety Bundles for Reducing Maternal Severe Hypertension Related Mortality in Tertiary Hospitals: A Systematic Review	37
Tranexamic Acid as a Prophylactic for Postpartum Hemorrhage Prevention in Obstetric Care: A Systematic Review and Meta-Analysis	38
Effect of Community-Based Referral and Social Support Interventions on Obstetric Care Utilization and Maternal Outcomes in Low- and Middle-Income Countries: A Systematic Review Protocol	39
Dietary Pattern, Menstrual Characteristics, and Anemia in Adolescent Girls: Implications for Reproductive Health Integration in Cultural Contexts	40
Maternal Infection Related Inflammation and Adverse Pregnancy Outcomes: Implications for Reducing Maternal and Neonatal Mortality – A Systematic Review	41
Effectiveness of Integrating Local Wisdom Practices (Traditional Birth Attendants and Local Cultural Practices) with Modern Reproductive Health Services in Reducing Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR): A Systematic Review (2020–2025)	42
Beyond Treatment: The Impact of Insurance Coverage Gaps on Adherence and Clinical Outcomes in Women with Prolactinoma-Induced Amenorrhea—A Descriptive Clinico-Social Case Series	43
The Effect of Paternal Involvement in Antenatal Care and Adherence to Iron Supplementation on the Incidence of Anemia among Pregnant Women in Pelalawan Regency, Riau Province	44
Postpartum Intrauterine Device Placement in an Unmarried Adolescent Mother: Clinical Justification and Legal Considerations in Indonesia	45
Maternal Critical Asthma pada Kehamilan 26 Minggu dengan Fatalitas: Tantangan Integrasi Layanan Kesehatan Reproduksi dan Pengelolaan Penyakit Kronis.....	46
sebagai Upaya Penurunan AKI-AKB.....	46
Inequalities in Maternal Health Service Access and Maternal Mortality in Indonesia	47
Angiogenic and Placental Biomarkers for Early Detection of IUGR:.....	48
A Comprehensive Systematic Review.....	48
Analysis of Profile, Knowledge, Attitude, and Behavior of Patients Toward Delayed Detection of Cervical Cancer at RSUD Arifin Achmad Pekanbaru in 2025	49
Dari Medan Konflik ke Kesehatan Ibu dan Anak: Telaah Sistematis Dampak Peperangan pada Luaran Maternal dan Neonatal	50
Maternal Mortality Reduction: Integrating Social Obstetrics and Local Maritime Systems in Kepulauan Anambas Archipelago, Indonesia (2010–2025)	51
Psychosocial Dilemmas and Diagnostic Challenges of Primary Amenorrhea	52
in Adult Patients: A Case Report	52

Digital Risk Surveillance in Maternal Care to Accelerate Sustainable	53
Development Goal 3 Targets: A Scoping Review	53
The Effectiveness of Educational Video Interventions on Knowledge and Attitudes Toward Premarital Sex among Female Students of Public Senior High Schools in Sukarami District, Palembang City.....	54
B. POSTER PRESENTATION	55
Lingkar Kepala Janin sebagai Prediktor Cephalopelvic Disproportion: Analisis Prospektif pada Kasus Persalinan Per Vaginam Spontan dan Seksio Sesarea di RSUD Dr. Adhyatma MPH Semarang.....	56
Gambaran Sosial Demografi dan Pengetahuan Ibu Hamil Usia Dini Mengenai Pemeriksaan Kehamilan Menggunakan Buku KIA	57
When Warning Sign Escalate : Managing Partial Hellp Syndrome in an Impending Eclampsia Case	58
4 Downstream Factors Contributing to the Government’s Failure to Reduce Maternal Mortality Rates in Type C Hospital	59
Intracranial Hemorrhage in Hellp Syndrome Complicating Twin Pregnancy: A Case Report.....	60
From Gut to Placenta, Probiotics for Preeclampsia Prevention: A Comprehensive Meta-Analysis Supporting Maternal and Perinatal Mortality Reduction.....	61
Embolisasi Arteri Uterina Bilateral pada Perdarahan Postpartum Lanjut Pasca Seksio Sesarea: Integrasi Intervensi Uterus-Sparing dalam Sistem Rujukan Berjenjang untuk Penurunan AKI.....	62
Atypical Location of Uterine Rupture During the Latent Phase of Oxytocin-Induced Labor.....	63
Mini Project: Enhancing Maternal Knowledge Through a Pregnancy Journal Book Intervention in Mangunsari Primary Health Care	64
Thirty-Seven Weeks of Pregnancy with Untreated Hebephrenic Schizophrenia: A Case Report ...	65
The Association of Age, Parity, and Educational Level with the Incidence of Second-Stage Labor in the Emergency Department of Rumah Sakit Ibu dan Anak (RSIA) Bunda Arif, 2024.....	66
Effect of Maternal Lipid-Based Nutrient Supplementation on Human Milk Composition: A Systematic Review	67
Kehamilan dengan Penyakit Moyamoya: Sebuah Laporan Kasus	68
Induced Lactation in a Nulliparous Woman as a Mahram Solution for an Adopted Infant: A Case Report.....	69
Perbandingan Akurasi Rumus Johnson Toshach dengan Pemeriksaan Ultrasound untuk Prediksi Berat Badan Lahir Bayi Spontan Pervaginam di RS PKT Bontang Periode Februari - April 2025... ..	70
Descriptive Study on Postpartum Depression Level in Postpartum Mothers at RSUD Bali Mandara from March 2025 to January 2026	71
Optimizing PPH Prevention in LMICs: A Systematic Review Comparing Heat-Stable Carbetocin and Oxytocin Across Diverse Delivery Modes	72

Double Burden dalam Kehamilan : Peran Layanan Primer dalam Deteksi Risiko Komplikasi sebagai Strategi Penurunan AKI dan AKB.....	73
Obstetric and Maternal Determinants of Low Birth Weight: A Retrospective Case-Control Study at RSKIA Arvita Bunda (2020–2026).....	74
Case of Giant Uterine Myoma during First Trimester Pregnancy at Pelni Hospital: A Case Report	75
Kerasukan ataukah Kejang, Studi Kasus yang Dialami Wanita 18 Tahun dengan G1p000 35-36 Minggu: Sebuah Laporan Kasus Mengenai ANC dari Ujung Barat Pulau Madura.....	76
HEXCOSystem 6–6–6: A Conceptual Reproductive Health Ecosystem Integrating Multidimensional Determinants and Local Wisdom to Strengthen Maternal–Neonatal Outcomes	77
KELORA: A Translational Local Wisdom-Based Innovation Derived from HEXCOSystem to Support Maternal Care and Improve Maternal–Neonatal Outcomes	78
Maternal Near-Miss in Suspected Amniotic Fluid Embolism: An Integrated HEXCOSystem-Based Emergency Response to Prevent Maternal Mortality	79
Exploring Maternal Mental Health Status and Sociodemographic Determinants:	80
A Cross-Sectional Study.....	80
Comparison of the Accuracy of the Johnson Toshach Formula with Ultrasound Examination for Prediction Birth Weight of Spontaneous Vaginal Birth at Pkt Bontang Hospital in The Period of February - April 2025.....	81
Optimizing the Use of the Maternal and Child Health Book for Maternal Health Education in Kulon Progo, Indonesia.....	82
Term Abdominal Pregnancy in an HIV-Positive Adolescent with Inadequate Antenatal Care: A Case Report Highlighting Sociocultural Vulnerability and Health System Gaps.....	83
Implementing the Edinburgh Postpartum Depression Scale in Obstetric Care: an Evidence-Based Case Review.....	84
A Gold Nanoparticle-Modified Paper-Based Electrochemical Point-of-Care Biosensor for Early Antenatal Screening of Preeclampsia Using Urinary hsa-miRNA-1-3p Biomarker in Low-Resource Settings	85
The Relationship between Adolescent Pregnancy and Anemia in Pregnancy at Rumah Sakit Idaman Banjarbaru in 2024–2025.....	86
Analysis of Obstetric Emergencies Based on Antenatal Care Quality and the Maternal Referral System at Ulin General Hospital: A Mixed-Methods Analysis	87
Unmet Need pada Multipara: Menggali Akar Psikososial Ketidakpatuhan Kontrasepsi dari Sudut Pandang Pasien	88
Modern Contraceptive Use in Sexually Active Adolescent Females: What Shapes the Decision?.....	89
Efektivitas Telehealth terhadap Penurunan Kematian Neonatal: Meta-Analisis Pendahuluan	90

Transformation of Pre-Conception Care: Comprehensive Nutritional Intervention Strategies for Brides-to-be in an Effort to Reduce Maternal Risk at Wonosari II Public Health Center	91
MLH1 Expression as a Predictor of Chemosensitivity in Ovarian Cancer: Systematic Review of Clinical Evidence	92
Analysis of High-Risk Pregnancy on Maternal Referral Decision in Antenatal Care Services at Ulin Regional General Hospital	93
Bacterial Vaginosis as a Risk Factor for Preterm Premature Rupture of Membranes: A Meta-Analysis.....	94
Suspected of Complex Lethal Osteochondrodysplasia Resulting in Recurrent Pregnancy Loss: A Case Report	95
Adolescent Pregnancy in Social Vulnerability: Integrating Reproductive Health and Local Wisdom to Reduce Severe Maternal Morbidity	96
Multifactorial Eclampsia in Nulliparous Women: A Case Report	97
Associated Between Prenatal Fluoride Exposure and Birth Outcomes: A Global Systematic Review	98
Early Marriage and Maternal–Child Health Outcomes in East Java: A Multi-Year Ecological Analysis (2019–2023)	99
Maternal RSV Vaccination during Pregnancy: Evidence from Low- and Middle-Income Countries – A Systematic Review	100
The Three Delays Model in Obstetric Hemorrhage: A Case of Suspected Placental Abruption with Severe Preeclampsia and Anemia	101
Social Determinants of Adolescent Pregnancy in Low- and Middle-Income Countries: A Systematic Review	102
Analisis Faktor Determinan yang Mempengaruhi Kunjungan Antenatal Care (ANC) di Indonesia: Tinjauan Sistematis.....	103
Breaking the Cycle of Maternal Mortality: The Protective Role of Vitamin D in Preventing Preeclampsia - A Systematic Review of Randomized Controlled Trials	104
Hubungan Tingkat Pendidikan dengan Penggunaan Intra Uterine Device (Iud) Paska Plasenta pada Ibu Bersalin di Rumah Sakit Ibu dan Anak Kuncup Bunga Lombok Timur Tahun 2025.....	105
Infant Mortality Rate 0 - 11 Months at Aek Kanopan Regional General Hospital in 2025	106
Adolescent Pregnancy and Risk of Neonatal Mortality: A Systematic Review and Meta-Analysis	107
Effectiveness of Culturally Adapted Digital Maternal Health Interventions Integrated with Local Wisdom and Community Based in Improving Maternal and Neonatal Outcomes: A Systematic Review (2021–2025).....	108
Acute Uterine Inversion with Massive Postpartum Hemorrhage and Hypovolemic Shock: Management with Emergency Reposition and B-Lynch Uterine Compression Suture	109

A ‘Missing’ IUD with Subsequent Pregnancy: Undetected Extrauterine Migration to the Posterior Broad Ligament	110
Overview of Contraceptive Method Selection Based on Maternal Characteristics among Postpartum Women at Bali Mandara Regional General Hospital, 2025–2026	111
Preterm Delivery Following Appendectomy due to Gangrenous Appendicitis in Pregnancy: A Case Report	112
Correlation between Gestational Eclampsia and Family History of Hypertension: A Systematic Literature Review (2021–2025)	113
Shock Index: A Simple Tool for Assessing Clinical Severity and Outcomes in Referred Postpartum Hemorrhage	114
Dilema Etik dalam Pengambilan Keputusan pada Cesarean Scar Pregnancy: Menyeimbangkan Keselamatan Maternal dan Viabilitas Janin	115
From Mental Health to Birth Outcomes: Integrating Antenatal Depression Screening to Reduce Preterm Birth Risk A Systematic Review and Meta-Analysis.....	116
Term Pregnancy with Type II DM, Post Circlass A.I. Cervical Shortening, has had Two Caesari..	117
Inversio Uteri Postpartum setelah Persalinan oleh Tenaga Nonmedis dengan Perdarahan Masif: Laporan Kasus.....	118
Effectiveness of Local Indonesian Food–Based Nutritional Interventions in Improving Hemoglobin Levels among Pregnant Women with Anemia: A Systematic Review.....	119
Screening for Antenatal Mental Health Disorders and Adverse Maternal and Neonatal Outcomes: A Global Systematic Review	120
Effectiveness of Remote Monitoring for Antenatal Care in Rural Area: A Systematic Review	121
Breaking the Intergenerational Cycle of Maternal and Nutritional Risk: A Systematic Review of Social Obstetrics Interventions on Maternal and Neonatal Outcomes in Low- and Middle-Income Countries	122
Faktor-Faktor yang Mempengaruhi Kejadian Kematian Maternal dan Perinatal di RSUP Prof. Dr. R. D. Kandou Manado: Integrasi Kesehatan Reproduksi dan Hilirisasi Berbasis Kearifan Lokal sebagai Strategi Penurunan AKI, AKB & Double Burden	123
Determinasi Tingginya Angka Seksio Sesarea di RSUP Prof. Dr. R. D. Kandou sebagai Pusat Rujukan: Analisis Faktor Klinis dan Non-Klinis.....	124
Fetal Bradycardia as a Reversible Manifestation of Severe Maternal Hypokalemia with Transaminitis susp. Secondary Rhabdomyolysis in Late Pregnancy: A Case Report	125
The Accuracy Of SFLT-1/PLGF in Predicting Time to Delivery in Patients with Preeclampsia: A Systematic Review	126
Dampak Perubahan Iklim terhadap Luaran Maternal dan Neonatal, Adakah Hubungan dan Solusi Mengatasinya?: Sebuah Telaah Sistematis.....	127
Comparation of Clinical, Biomarker, Ultrasonographic, and Machine Learning-Based Predictive Models for Preeclampsia: a Systematic Review and Meta-Analysis	128

Early Delivery as Active Management in Severe Intrauterine Growth Restriction due to Hypertensive Disorders: A case report.....	129
Profil Rujukan Maternal di RSUD Dr. Doris Sylvanus Palangkaraya Tahun 2024-2025	130
Characteristics of Pregnant Women Aged \leq 20 Years and Delivery Outcomes at Pupuk Kaltim Hospital: 2024– 2025	131
Major Congenital Anomalies in a Tertiary Referral Hospital in Riau: Implications for Improving Obstetric Services to Reduce Neonatal Mortality	132
Bridging Tradition and Modern Care: A Comprehensive Meta-Analysis of Traditional Birth Attendant Training Interventions on Perinatal, Neonatal, and Maternal Mortality.....	133
Between Autonomy and Survival: A Case of Eisenmenger Syndrome with Contraceptive Refusal Leading to Pregnancy Termination.....	134
From Tradition to Hemostasis: A Systematic Review of Postpartum Herbal Uterotonics and Their Integration into Modern Strategies for Preventing Postpartum Hemorrhage.....	135
Preterm Birth Associated with Delayed Healthcare Access and Prolonged Travel: A Case Report	136
Obgyns Approach in a Grand Multiparous Woman with Multiple Cesarean Sections and Contraceptive Refusal: A Case Report on Severe Maternal Risk.....	137
G4P2A1 at 7 Weeks of Gestation with Heterotopic Pregnancy (Intrauterine Fetal Death and Left Tubal Ectopic Pregnancy).....	138
“Halal” Abortion in Perspective Common Law System, Civil Law System and IUS Constituendum: Towards Legality and Safety	139
Cervical Cancer Identification from Papsmear Images Based on Artificial Intelligence	140
Rapidly Progressive Peripartum Cardiomyopathy with Concurrent Sepsis Leading to Fatal Outcome: A Case Report	141
Manajemen Holistik pada Remaja Disabilitas Intelektual dengan Riwayat Kekerasan Seksual: Pertimbangan Klinis, Etik, dan Hukum	142
Socioeconomic Determinants of Mode of Delivery in Secondary Hospitals in Yogyakarta.....	143
Robson Classification and Hospital Ownership as Determinants of Cesarean Section in Secondary Hospitals in Yogyakarta.....	144
Laporan Kasus: Kejadian Eklamsi Akibat Keterlambatan Rujukan.....	145
‘Lantern on St. Paul’s Dome’: A Metaphor for Giant Cervical Myoma	146
Strengthening Rural Referral Systems Through Early Ultrasound Detection of Placenta Accreta Spectrum: A Case Report in a Low-Resource Hospital	147
Respiratory Distress in a Preterm Neonate Born to an Active-Smoking Mother with Premature Rupture of Membranes: A Case Report and Implications for Antenatal Risk Screening.....	148
Comparative Oncological Outcomes, Morbidity, and Patient Selection in Surgical Management of Vulvar Cancer: A Systematic Review	149

Psychological Vulnerability and Pregnancy Loss: A Scoping Review of Maternal Mental Disorders and Spontaneous Abortion	150
Missed Antenatal Care Leading to Late Detection of Multiple High-Risk Conditions in Pregnancy: A Case Report	151
Severe Maternal Hypokalemia Mimicking Fetal Distress: A Case of Reversible Fetal Bradycardia with Suspected Rhabdomyolysis	152
The Double Burden in Pregnancy: Rheumatoid Arthritis-Associated Placental Insufficiency Leading to Fetal Growth Restriction with Brain-Sparing and AEDV—A Case Report	153
Hasil Skrining HPV Tipe 16 dan 18 serta Kolposkopi sebagai Prediktor Lesi Prakanker Serviks Derajat Tinggi: Implikasi untuk Triase pada Sistem Rujukan	154
VBAC yang Tidak Direncanakan pada Suspek PAS: Sebuah Pelajaran tentang Kewaspadaan dan Kesiapan Kegawatdaruratan	155
The HBV-Positive Surgeon: A Bioethical Analysis of Disclosure, Patient Safety, and Professional Rights	156
Junior Resident Doctors’ Experience in Clinical Decision-Making: When Evidence Based Medicine Evaded by Expert Opinions	157
Hubungan Pijat Perut Tradisional pada Kehamilan Trimester Lanjut dengan Risiko Solusio Plasenta dan Kematian Janin Intrauterin: Systematic Review	158
Obstetric Risks, Unintended Pregnancy, and High-Risk Pregnancy Literacy in Adolescent and Reproductive-Age Pregnancies at RSUD Ulin: A Comparative Analysis	159
Comparison of the Effects of Intrauterine and Rectal Misoprostol Combined with Oxytocin Versus Oxytocin Alone on Postpartum Hemorrhage: A Systematic Review and Meta-Analysis. 160	
From Inequality to Mortality: The Impact of Socioeconomic Disparities on Maternal Mortality — A Systematic Review	161
When Miscarriage is Not a Miscarriage: Diagnostic Challenge of Cesarean Scar Pregnancy in First Trimester Bleeding	162
Delayed Diagnosis of Imperforate Hymen Presenting with Urinary Symptoms and Abdominal Distension in an Adolescent: A Case Report	163
Amniotic Fluid Embolism during Cesarean Section: A Case Report with Ethical Consideration . 164	
Over-treatment in Terminal Ovarian Cancer Patients with Multiorgan Failure: An Ethical and Clinical Review in ICU Decision-Making	165
Dilema Wanita dengan Giant Adeniosis: Otonomi VS Paternalisme	166
Dilema Etik Dokter dalam Pengambilan Keputusan Tubektomi pada Perempuan Usia Muda: Laporan Kasus dengan Perspektif Bioetik, Hukum, Sosial Budaya, dan Agama	167
Analisis Faktor Maternal yang dapat Mempengaruhi Kejadian Preeklampsia di Puskesmas Tiga Dolok Kabupaten Simalungun	168
Clinical and Psychosocial Challenges in an Adolescent Pregnancy Complicated by Severe Mitral Regurgitation and Preeclampsia: A Case Report Using the DASS-21	169

Extrauterine IUD Translocation to the Rectosigmoid Colon with Complication Abscess Formation	170
Dilema Etik Pengelolaan Abandoned Embryo pada Program IVF	171
Postpartum Fecal Incontinence in an Adolescent due to Obstetric Anal Sphincter Injury: Challenges of Early Detection in Primary Care	172
From Suspected Cesarean Scar Pregnancy to Placenta Accreta Spectrum: The Role of Referral Systems and Continuity of Care in High-Risk Pregnancy	173
Placental Abruption with IUFD: When Delayed Care Turns Fatal—A Clinical and Social Perspective	174
Hydatidiform Mole in an Adolescent: A Sentinel Event of Delayed Care and Reproductive Health Inequity	175
Impact of Community-Based Premarital Education on Reproductive Health Knowledge: Implications for Marital Readiness and the Role of Sex and Nutritional Status among Young Adults	176
Mempertahankan Kehamilan pada Ibu dengan Mati Batang Otak: Dilema antara Mengakhiri Penderitaan Ibu VS Memberi Harapan Hidup pada Janin	177
Determinan Sosial dalam Upaya Terminasi Kehamilan Tidak Aman pada Kehamilan Tidak Diinginkan: Serial Kasus dengan Luaran Maternal, Fetal, serta Psikososial	178
Assessing Readiness and Training Needs for Interprofessional Collaborative Care of Adolescent Pregnancies in Primary Care: A Mixed-Methods Study	179
Gaps in Postnatal Care: Severe AKI and SIRS from Missed Postpartum Urinary Retention and Preeclampsia – A Case Report.....	180
Adolescent Pregnancy and Adverse Maternal-Neonatal Outcomes: Evidence from a Systematic Review and Meta-analysis.....	181
Delayed Diagnosis of Imperforate Hymen in an Adolescent: Missed Clinical Cues and Sociocultural Barriers to Genital Examination: A Case Report	182
Diagnostic Challenges of HbE/ β -Thalassemia in a Multigravida with Refractory Anaemia and History of Repeated Transfusions: A Case Report	183
Luaran Ibu dan Perinatal pada Rujukan Maternal Hipertensi dalam Kehamilan di Rsud Dr. Doris Sylvanus Palangka Raya Kalimantan Tengah Tahun 2024-2025.....	184
A Case Report of HPV Infection in a Low-Risk, Multiparous Women in Camouflage with IUD Insertion	185
Abortus Medicinalis in Uncorrected TOF Pregnancy: Integrated Obstetric-Social Strategy to Reduce Maternal Mortality	186
Fatal Convergence: Septic Shock, HIV Treatment Interruption, and Intrauterine Fetal Death in Mid-Trimester Pregnancy—A Catastrophic Case Report.....	187
Beyond Obstetric Risk: Clinical Complexity and Multidisciplinary Management of Teenage Pregnancy at a Tertiary Referral Center	188

The Effectiveness of Condom Use in Preventing HIV/AIDS among High-Risk Populations: A Bibliometric	189
A Sentinel Case of Undiagnosed Congenital Heart Disease in Pregnancy: A Preventable Adverse Outcome.....	190
Abnormal Uterine Bleeding in a Postmenopausal Woman Misinterpreted as Normal Menstruation: Cases Serial Highlighting Knowledge Gaps in Elderly Women	191
Clinical Characteristics and Management Patterns of Holistic Obstetric and Gynecologic Cases at a National Referral Hospital in Indonesia: A Retrospective Descriptive Study (2024–2025)	192
Delayed in Accessing Post-Sexual Violence Service: Clinical Implications and System Gaps in Managing Victims in Obstetric and Gynecology Services: A Case Report Study.....	193
“MMS: Solutions for Stunting Problems or Just Changing Supplements?”	194
Ruptured Left Tubal Ectopic Pregnancy with Massive Hemoperitoneum and Hemorrhagic Shock in a Woman with Irregular Three-Month Injectable Contraceptive Use: A Case Report	195
Placental Migration from Total to Marginal Placenta Previa in an Obese Primigravida Resulting in Favorable Term Cesarean Delivery: A Case Report	196
Between Life and Death, a Family Stands: Are Pregnancy Companions’ Knowledge of Danger Signs and Birth Preparedness and Complication Readiness Associated? A Cross-Sectional Study	197
Atypical Eclampsia without Hypertension Presenting as Dyspepsia: A Diagnostic Challenge	198
Giant Condyloma Acuminata pada Kehamilan: Kompleksitas Multidimensional antara Risiko Klinis, Stigma Sosial, dan Dilema Etik dalam Pengambilan Keputusan Obstetri	199
Mengintegrasikan Peran Klinis dalam Paradigma Obstetri dan Ginekologi Sosial: Strategi untuk Menjaga Relevansi dan Keutuhan Peran Dokter Spesialis	200
Evidence-Based Impact of Paternal Secondhand Smoke Exposure on Preterm Birth and Low Birth Weight: Supporting the Implementation of Peraturan Pemerintah Nomor 28 Tahun 2024.....	202
An Evidence-Based Approach to Bartholinitis in Pregnancy within a Non-Marital Sexual Context: A Case Report from a Primary Healthcare Setting	203
Knowledge, Attitudes, Behavior and Factors Influencing Adolescent Free Sex Among Midwifery Diploma Students in Palembang City	204
Kehamilan Ektopik Terganggu yang Tidak Terdiagnosis pada Pasien dengan Low-Grade Squamous Intraepithelial Lesion: Laporan Kasus.....	205
Integration of Cervical Cancer Screening and Nutrition Counseling Based on Local Foods to Address the Double Burden in Reproductive Health Services: A Case-Control Study at Arifin Achmad Hospital	206
Mind–Body Exercise (Yoga, Pilates) during Pregnancy and Postpartum Depression: A Systematic Review	207
Dilema Etis dan Klinis pada Grandemultiparitas, Infeksi Sifilis yang Tidak Diobati, dan Penolakan Sterilisasi.....	208

Karakteristik Sistem Rujukan Kasus Obstetri di Rumah Sakit Jejaring Pendidikan di Kota Makassar Tahun 2024-2025.....	209
Psychosocial Impact of Recurrent Pregnancy Loss in a G7P0A6 Patient with Hyperthyroidism: A Case Report	210
Bisphenol-A Exposure and Precocious Puberty: Evidence, Biological Mechanisms, and Relevance to Adolescent Reproductive Health in Indonesia	211
Effect of Ramadan Fasting during Pregnancy on Fetal Growth Outcomes: A Systematic Review	212
Maternal and Women’s Health in Social and Cultural Perspective: A Socio-Cultural Case from Central Java, Indonesia.....	213
Hubungan Pre-Pregnancy Body Mass Index dan Gestational Weight Gain dengan Luaran Maternal dan Neonatal : Systematic Review.....	214
A Holistic Approach to Unplanned Unmarried Teenage Pregnancy Complicated by Undernutrition and Psychosocial Vulnerability: A Case Report	215

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Venue: Royal Ambarrukmo Hotel, Yogyakarta

Conference Theme: Provides a leading forum for the presentation of new advances and research insights in the fields of reproductive health in Indonesia.

CONFERENCE CHAIR MESSAGE

It is with great pleasure and sincere appreciation that I welcome you to the Proceedings of the Free Paper Session (Oral and Poster Presentation) of PIT HOGSI 2026 in Yogyakarta. This proceedings book represents a valuable collection of scientific work and scholarly contributions that reflect our shared commitment to advancing knowledge, clinical practice, and innovation in obstetrics, gynecology, and reproductive health.

The Free Paper Session, encompassing both oral and poster presentations, serves as an important academic platform for clinicians, researchers, and young investigators to present original findings, exchange ideas, and contribute to meaningful scientific discourse. The quality and diversity of the works compiled in this proceedings demonstrate the passion and dedication of our professional community in continuously striving for excellence in women's health.

I am particularly honored by our collaboration with Jurnal Kesehatan Reproduksi in the Free Paper Session. This collaboration represents an important milestone in strengthening scientific publication and academic partnership, while providing broader opportunities for high-quality research presented in this forum to gain wider recognition and contribute to the development of reproductive health science.

On behalf of the organizing committee, I would like to express my deepest gratitude to all authors, presenters, reviewers, scientific committee members, and partners whose dedication and contributions have made this proceedings possible. Your work is essential in fostering a culture of inquiry, evidence-based practice, and collaborative advancement in our field.

I hope that the scientific insights shared within these pages will inspire further research, encourage collaboration, and ultimately contribute to better healthcare outcomes for women and families.

Warm regards,



PERTEMUAN ILMIAH
TAHUNAN XVII
HOGSI 2026

Dr. dr. Eugenius Phywai Ganap, Sp.O.G., Subsp. Obginsos

Conference Chair

PIT HOGSI 2026

EDITOR IN CHIEF MESSAGE

On behalf of the Editorial Board of Jurnal Kesehatan Reproduksi UGM, it is our great pleasure to present this special proceedings edition featuring the oral and poster presentations of PIT HOGSI 2026, Yogyakarta.

This proceedings edition reflects the enthusiasm, scientific dedication, and collaborative spirit of clinicians, researchers, academicians, and healthcare professionals who continuously contribute to the advancement of reproductive health and gynecologic science. The diversity of topics presented in this edition highlights the growing commitment to evidence-based practice, innovation, multidisciplinary collaboration, and improved patient care in the field of reproductive medicine especially to reduce maternal mortality in Indonesia.

We sincerely appreciate all authors, reviewers, scientific committees, speakers, and organizers whose valuable contributions made this publication possible. We also extend our gratitude to all participants of PIT HOGSI 2026 for presenting an inspiring academic atmosphere that encourages scientific discussion, and knowledge exchange.

We hope this proceedings edition will serve not only as documentation of scientific achievement, but also as a meaningful reference that inspires future research, collaboration, and development in reproductive health.

Finally, we are honored that Yogyakarta, a city well known for its academic and cultural heritage, becomes the host of this important scientific meeting. May PIT HOGSI 2026 strengthen collaboration and further advance of reproductive health sciences in Indonesia.

Warm regards,



dr. Sarrah Ayuandari, Ph.D, Sp.OG

Editor in Chief

Jurnal Kesehatan Reproduksi UGM

A. ORAL PRESENTATION

The Role of Antenatal Care Quality in Preventing Maternal Mortality in Purwakarta, Indonesia

Sella Zenitasari^{1,2}, Eugenius Phywai Ganap¹

¹Department of Obstetrics and Gynecology, Faculty of Medicine, Nursing, and Public Health, Universitas Gadjah Mada, Yogyakarta, Indonesia

²Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Pendidikan Indonesia, Bandung, Indonesia

ABSTRACT

Background: Maternal health plays a key role in fostering a healthy and high-quality generation within a nation. One indicator of a nation's health status is the maternal and infant mortality rate. Maternal and infant deaths can be prevented through high-quality antenatal care (ANC). In Indonesia, integrated ANC programmes have been implemented; however, the number of visits alone is insufficient, and the quality of care is a critical determinant of maternal outcomes. This study aimed to assess the quality of ANC and its association with maternal mortality in Purwakarta, Indonesia.

Methods: This study used a mixed-methods approach, specifically the explanatory sequential method, which combined an analytical observational quantitative method using a case-control design with a sample size of 90 (24 case deaths and 66 controls), followed by chi-square tests and logistic regression. The qualitative method involved in-depth interviews with 13 informants to explain the quantitative findings.

Results: High-quality ANC was significantly associated with reduced maternal mortality ($p < 0.001$; OR=0.10; 95% CI: 0.001–0.158). Factors influencing maternal mortality prevention included clinical management ($p < 0.001$; OR=7.692; 95% CI: 0.278–72.87) and pregnancy complications ($p < 0.001$; OR=193.857; 95% CI: 8.71–251.78). Qualitative findings indicated that ANC quality is influenced by healthcare provider competence, the availability of facilities, the effectiveness of the referral system, maternal health programmes, and maternal education and family support.

Conclusion: Improving ANC quality and strengthening the referral system are key strategies for reducing maternal mortality. A comprehensive evaluation within the Maternal and Perinatal Death Surveillance and Response (MPDSR) system is needed to identify root causes and ensure appropriate follow-up.

Keywords: Quality of Antenatal Care, maternal and child health service standards, maternal mortality

Comprehensive Management of Severe Preeclampsia Cases in Primary Healthcare Facilities: Efforts to Optimize the Quality of Social Obstetric Care

Rudi Asmajaya¹, Dini Hidayat², Ayu Angelina Ronosulistyo²

¹Subspecialist Study Program in Social Obgyn, Faculty of Medicine, Padjajaran University

²Department of Obstetrics & Gynecology, Faculty of Medicine, Padjajaran University

ABSTRACT

Background: Preeclampsia is a pregnancy complication that is one of the main causes of maternal death in the world, World Health Organization reporting that 10–15% of maternal deaths are related to hypertensive disorders during pregnancy, including preeclampsia. In Indonesia, the 2023 Health Survey indicates a maternal mortality rate of approximately 189 per 100,000 live births, with hypertension during pregnancy as a major contributing factor. Managing severe preeclampsia in primary healthcare facilities does not only require a clinical approach but also a comprehensive approach with the aim integrates clinical care, health education, social factors, and family support is essential, following the principles of social obstetrics.

Research Methods: This study uses a qualitative descriptive method with a case study type. The subjects included healthcare providers, such as doctors and midwives, and pregnant women receiving care. Data were collected through in-depth interviews and observations and analyzed descriptively through data reduction, presentation, and conclusion drawing.

Discussion Results: The research results show that comprehensive management is implemented through clinical aspect of routine antenatal care examinations, blood pressure monitoring, maternal and fetal condition assesments and initial management before referal to more comprehensive facilities. Sosial aspects of services are carried out through health education such as couseling and classes for pregnant women as well as family support, to optimize the quality of sosial obstetric services through quality antenatal care, easy acces to services and a good coordinated referral system.

Conclusion: In conclusion, implementing comprehensive management combined with a social obstetric approach in primary healthcare facilities enhances the quality of maternal healthcare, reinforces clinical care, increases awareness and participation, and supports families, ultimately helping to prevent complications and improve maternal and fetal safety.

Keywords: severe preeclampsia, maternal healthcare, social obstetrics, primary healthcare facilities, comprehensive management

Early Adolescent Pregnancy with Syphilis: A Case Report Reflecting Multidimensional Risk, Structural Inequities and Gaps in Preventive Care in Indonesia: A Case Report

Jacobus Jeno Wibisono¹, Hadi Susiarno², Dini Pusianawati²

¹Program Studi Subspesialis Obginsos, Fakultas Kedokteran, Universitas Padjajaran

²Departemen Obstetri & Ginekologi, Fakultas Kedokteran, Universitas Padjajaran

ABSTRACT

Background: Adolescent pregnancy remains a significant public health concern due to the coexistence of biological vulnerability and social determinants that may negatively affect maternal and neonatal outcomes. In addition to obstetric complications, adolescent pregnancy is frequently associated with sexually transmitted infections, particularly syphilis, which can lead to congenital syphilis, stillbirth, and neonatal mortality if not detected early. Antenatal screening programs, including the triple elimination strategy targeting HIV, syphilis, and hepatitis B, play a crucial role in preventing vertical transmission and improving maternal–fetal outcomes.

Case Presentation: A 14-year-old primigravida presented to the obstetric and gynecologic social clinic after antenatal screening under the national triple elimination program revealed reactive syphilis serology. The patient reported a three-month history of genital burning sensation during urination. Obstetric ultrasonography confirmed a viable intrauterine pregnancy with a gestational age of 13 weeks and 3 days. Clinical evaluation also identified maternal undernutrition with a mid-upper arm circumference of 22.7 cm. The case was further characterized by social vulnerabilities, including extremely young maternal age, limited education, unregistered marriage, and low socioeconomic status.

Discussion: This case highlights the interaction between biological immaturity and social vulnerability in adolescent pregnancy. Early maternal age and undernutrition increase the risk of obstetric and adverse perinatal outcomes. Concurrently, limited education and socioeconomic disadvantage may restrict access to healthcare and delay diagnosis. The identification of reactive syphilis through antenatal screening emphasizes the importance of early detection in preventing vertical transmission. However, the success of such interventions depends on accessibility and awareness within vulnerable populations, underscoring the need for integrated care approaches.

Conclusion: Adolescent pregnancy complicated by sexually transmitted infection reflects both clinical risk and social vulnerability. Early detection through antenatal screening and a biopsychosocial approach integrating medical care, reproductive health education, and social support are essential to improve maternal and neonatal outcomes.

Keywords: Adolescent pregnancy; Biopsychosocial vulnerability

Optimizing the Maternal and Child Health (MCH) Book for Family Planning Counseling in Kulon Progo Using the GATHER Method

Syah Rini Wisdayanti², Shinta Prawitasari¹, Diannisa Ikarumi Enisar Sangun¹, Sella Zenitasari¹

¹ Department of Obstetrics and Gynecology, Faculty of Medicine, Nursing, and Public Health, Universitas Gadjah Mada, Yogyakarta, Indonesia

² Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Sebelas Maret, Surakarta, Indonesia

ABSTRACT

Background: Kulon Progo Regency continues to face maternal and child health challenges, including recorded maternal deaths in 2024–2025 and a stunting prevalence of 14.8% based on SSGI 2024. Strengthening the family planning (FP) program through quality counseling is a preventive strategy for reducing high-risk pregnancies, improving birth spacing, and supporting stunting prevention. However, FP counseling at the primary care and community health worker level remains insufficiently structured and has not fully optimized the Maternal and Child Health (MCH) Book as an educational medium.

Methods: This activity used a community-based capacity building approach with a one-group pretest–posttest evaluation design. A total of 26 participants (21 community health workers, 4 midwives, and 1 general practitioner) completed interactive training, paired roleplay simulations, and video monitoring two weeks after training. Knowledge was assessed using 15 multiple-choice questions. Practical skills were scored using a GATHER checklist (0–20 points). Statistical analysis was performed using a paired t-test.

Results: Mean knowledge scores improved significantly from 13.62 to 14.54 ($p = 0.001$). The greatest improvement occurred in the GATHER method domain (38.85%). Video evaluation showed a mean skills score of 18.83 (SD 1.75), with 91.3% of participants rated as excellent. Participants also demonstrated high satisfaction (mean 3.42–3.88 on a 4-point scale).

Conclusion: Community capacity building through MCH Book optimization for GATHER-based FP counseling effectively improves counseling competence as an effort to reduce maternal mortality and stunting rates in Kulon Progo.

Keywords: Family Planning Counseling; GATHER Method; MCH Book; Capacity Building; Community Health Workers.

Analysis of Dominant Factors in Downstream Governance to Reduce Maternal Mortality in Type C Hospitals

Sardjana, Nuzma Anbia, Gulam Gumilar
Faculty of Medicine, Syarif Hidayatullah State Islamic University, Jakarta

ABSTRACT

OBJECTIVES: This study aims to develop an optimal downstream governance (DG) model to reduce maternal mortality in Type C Hospitals, specifically to:

1. Determine the influence of the work ethic variable in the DG model and optimize the DG model to reduce maternal mortality in Type C Hospitals.
2. Determine the influence of the blood facilities variable in the DG model and optimize the HG model to reduce maternal mortality in Type C Hospitals.
3. Determine the influence of the communication facilities variable in the DG model and optimize the DG model to reduce maternal mortality in Type C Hospitals.

METHODS: This study is an Operational Research System Analysis (ORSA) using an integer mathematical programming approach and was conducted in Type C Hospitals, which serve as the population in this study. The main variables observed were:

- a) work ethic, with subvariables of income, linear mindset, holidays, years of education, and age;
- b) blood facilities, with subvariables of blood supply, linear mindset, budget, and blood demand;
- c) communication facilities, with subvariables of budget, team agreement, and linear mindset.

RESULTS: The following conclusions can be drawn from this study:

1. The DG model is optimal for reducing maternal mortality in Type C hospitals.
2. The contribution of the work ethic variable in the DG model to reducing maternal mortality in Type C hospitals is 32%.
3. The contribution of the blood facilities variable in the DG model to reducing maternal mortality in Type C hospitals is 28%.
4. The contribution of the communication facilities variable in the DG model to reducing maternal mortality in Type C hospitals is 40%.

The optimal DG model for reducing maternal mortality in Type C hospitals can be optimized by maximizing the main and subvariable variables of work ethic, blood facilities, and communication facilities. Based on the results of this study, it is recommended that the government, particularly the Health Office, redirect the maternal mortality reduction program by referring to the DG research findings.

Keywords: Dominant Factor Analysis, downstream governance, work ethic, blood facilities, communication facilities, maternal mortality.

Hubungan antara Ratio Fibrinogen-Albumin terhadap Kejadian Abortus Imminens

Mochammad Ghazian Nugraha, Nusratuddin Abdullah, Johnsen Mailoa, Samrichard Rambulangi,
Eddy R. Moeljono, dan Rudy B. Leonardy
Universitas Hasanuddin

ABSTRAK

Latar Belakang: Abortus imminens adalah kondisi yang ditandai dengan perdarahan pervaginam pada awal kehamilan dengan serviks masih tertutup dan embrio masih hidup, serta berhubungan dengan peningkatan risiko luaran kehamilan yang merugikan. Fibrinogen merupakan protein fase akut positif, sedangkan albumin adalah protein fase akut negatif; rasio fibrinogen–albumin (FAR) telah diusulkan sebagai penanda yang mencerminkan status koagulasi, nutrisi, dan inflamasi. Penelitian mengenai hubungan FAR dengan abortus imminens masih terbatas, khususnya di Indonesia. Penelitian ini bertujuan menilai

Tujuan: Menganalisis hubungan antara FAR dengan kejadian abortus imminens.

Metode: Penelitian ini merupakan observasional analitik dengan desain cross-sectional yang melibatkan 80 ibu hamil usia kehamilan 6–20 minggu dari beberapa rumah sakit di Makassar, terdiri dari 35 ibu hamil dengan abortus imminens, 10 ibu hamil dengan abortus spontan dan 35 ibu hamil dengan kehamilan normal. Kadar fibrinogen dan albumin serum diukur menggunakan metode ELISA, kemudian dilakukan perhitungan FAR. Data dianalisis secara statistik untuk mengevaluasi hubungan antar variabel dengan IBM SPSS Statistics Version 30.0.0.0 (172).

Hasil: Rerata kadar fibrinogen pada kelompok abortus imminens dan abortus spontan secara signifikan lebih tinggi daripada kehamilan normal ($p < 0,001$). Albumin pada abortus imminens secara signifikan lebih tinggi daripada abortus spontan dan kehamilan normal ($p < 0,001$), sedangkan FAR pada abortus imminens secara signifikan lebih rendah daripada abortus spontan dan kehamilan normal ($p < 0,001$). Kadar fibrinogen, albumin dan FAR berbeda signifikan pada ketiga kelompok dengan pola yang sama juga ditemukan pada kehamilan dini. Pada kehamilan lanjut, hanya albumin dan FAR yang berbeda signifikan pada ketiga kelompok ($p < 0,001$), dan tidak ada perbedaan fibrinogen pada ketiga kelompok ($p = 0,056$).

Kesimpulan: FAR dan albumin menunjukkan perbedaan bermakna antara abortus imminens dan kehamilan normal pada usia kehamilan lanjut. FAR dapat digunakan sebagai parameter prognosis terjadinya Abortus spontan pada pasien yang mengalami abortus imminens

Kata kunci: Abortus imminens, rasio fibrinogen–albumin, albumin, fibrinogen, kehamilan.

Between Hope and Risk: Pregnancy with Congenital Heart Disease and Poor Treatment Adherence

Rosita Indriani¹, Zulvayanti², Windi Nurdiawan³

¹ Departement of Obstetric dan Gynecology, Padjadjaran University

ABSTRACT

Background: Congenital heart disease (CHD) is one of the most common cardiovascular disorders. With advances in management of CHD, the survival to adulthood and childbearing age is increasing all over the world. Pregnancy in women with CHD is considered high risk and may adversely affect fetal outcomes, including prematurity, low birth weight, and increased perinatal mortality. Beyond clinical concerns, this condition also raises ethical and social issues, such as limited access to healthcare, non-adherence to treatment, and the need for adequate reproductive counseling, all of which contribute to high maternal and neonatal mortality rates.

Case: A 35-year-old woman, gravida 2 para 0 abortus 1 (with a history of ectopic pregnancy), at 33–34 weeks of gestation presented with vaginal bleeding and fluid leakage. Evaluation revealed pregnancy with Tetralogy of Fallot (TOF) and complicated by intrauterine growth restriction (IUGR). The patient had a history of non-adherence to treatment. Multidisciplinary management was implemented, and pregnancy was terminated via cesarean section and complicated by postpartum hemorrhage.

Discussion: TOF is a cyanotic CHD and is classified as high risk in pregnancy, with maternal morbidity of 10–19%. This case illustrates the complexity of managing pregnancy in CHD, as well as ethical challenges in balancing maternal and fetal risks. Social factors, including non-adherence to therapy, limited health literacy, and restricted access to specialized care, significantly influence disease progression and pregnancy outcomes.

Conclusion: Multidisciplinary approach is essential to reduce maternal and neonatal complications. However, clinical interventions must be accompanied by attention to ethical and social aspects, including education, healthcare access, and effective postpartum counseling to prevent future high-risk pregnancies.

Keywords: Congenital heart disease, pregnancy, Tetralogy of Fallot, ethics

Descriptive Analysis of SERVQUAL Satisfaction of BPJS Patients with Antenatal Care (ANC) Services at Bangil Regional Hospital, Pasuruan Regency

Novida Ariani¹, Budi Prasetyo², Muhammad Ardian Cahya Laksana², Muhammad Yusuf², Moch. Hud Suhargono², I Wayan Agung Indrawan³
¹Trainee Sp2 Obgynsos FK Universitas Airlangga,
²Obsgin FK Universitas Airlangga,
³Obgyn FK Universitas Brawijaya

ABSTRACT

Background: Antenatal Care (ANC) services are a strategic intervention to reduce maternal morbidity and mortality. In the era of National Health Insurance (Jaminan Kesehatan Nasional/BPJS) participants, all services provided to BPJS participants need to be systematically evaluated, including through a SERVQUAL-based patient satisfaction approach that assesses the dimensions of Tangible, Reliability, Responsiveness, Assurance, and Empathy.

Objective: To analyze BPJS patient satisfaction with ANC services at Bangil Regional Hospital, Pasuruan Regency, based on the five SERVQUAL dimensions.

Methods: This descriptive quantitative study used a survey approach among 80 pregnant women in their third trimester who received ANC services from BPJS participants. The instrument used a SERVQUAL questionnaire with 15 items on a Likert scale of 1–5. The results were interpreted as follows: Good (76–100%), Adequate (56–75%), and Poor (<56%). The analysis was conducted descriptively using means, standard deviations, and percentages.

Results and Discussion: Most respondents were aged 20–35, multiparous, had secondary education, had low-to-middle income, and were mostly housewives. The total SERVQUAL satisfaction score was 4.80 ± 0.19 (96.0%), categorized as good. Tangible was 4.78 ± 0.32 (95.6%), Reliability was 4.78 ± 0.29 (95.6%), Responsiveness was 4.81 ± 0.29 (96.2%), Assurance was 4.78 ± 0.22 (95.6%), and Empathy was 4.85 ± 0.26 (97.0%). Empathy was the highest-ranking dimension, emphasizing the importance of communication and personal attention in ANC services. Variations in Tangible and Responsiveness scores indicate opportunities for improvement in facility comfort and service time efficiency.

Conclusion: BPJS patients' satisfaction with ANC services at Bangil Regional Hospital, Pasuruan Regency, is classified as good across all SERVQUAL dimensions.

Keywords: SERVQUAL, patient satisfaction, BPJS, antenatal care services, Bangil Regional Hospital, Pasuruan Regency

Determinant Factors of Cervical Cancer Screening Among Indonesian Women: A Systematic Review and Meta-Analysis

Ulul Albab^{1,2,3}, Junita Indarti^{1,2,3}, Farhan Athallah Jonea Siregar²

¹Pengurus Pusat Perkumpulan Obstetri dan Ginekologi Indonesia

²Fakultas Kedokteran Universitas Indonesia

³Trainee Obstetri dan Ginekologi Sosial, Departemen Obstetri dan Ginekologi, Fakultas Kedokteran Universitas Indonesia / RSUPN dr. Cipto Mangunkusumo

* Main writer: Ulul Albab, Pengurus Pusat POGI, Lantai 2, Jakarta Pusat 10320, Indonesia

ABSTRACT

Background: Cervical cancer remains one of the leading causes of morbidity and mortality among women in Indonesia. Despite the availability of national screening programs, coverage rates remain relatively low. Understanding the determinants influencing women's participation in cervical cancer screening is crucial to improve the effectiveness of preventive strategies.

Objective: To identify and analyze the determinants associated with cervical cancer screening uptake among women in Indonesia through a systematic review and meta-analysis.

Methods: A comprehensive literature search was conducted in PubMed, Scopus, Google Scholar, and Garuda databases for articles published between 2010 and 2025. Eligible studies were appraised for quality using the Joanna Briggs Institute (JBI) critical appraisal tool. Extracted data included study characteristics, screening methods, and reported determinants. Meta-analysis was performed to calculate pooled odds ratios (ORs) with 95% confidence intervals (CIs) using a random-effects model.

Results: A total of 18 studies involving approximately 8,000 women met the inclusion criteria. The most significant determinants of screening participation were good knowledge (OR = 8.55; 95% CI: 5.47–13.35), positive attitude (OR = 8.09; 95% CI: 4.87–13.44), and husband support (OR = 6.00; 95% CI: 2.90–12.41). Other significant factors included access to information (OR = 5.71; 95% CI: 3.16–10.32), health worker support (OR = 3.06; 95% CI: 2.53–3.69), high self-efficacy (OR = 3.05; 95% CI: 1.72–5.40), good access to healthcare facilities (OR = 3.01; 95% CI: 2.22–4.09), higher education level (OR = 2.91; 95% CI: 2.23–3.81), and higher socioeconomic status (OR = 2.48; 95% CI: 2.05–3.01). In contrast, age, marital status, and parity showed no significant associations with screening participation.

Conclusion: Cervical cancer screening uptake among Indonesian women is predominantly influenced by cognitive and social factors, particularly spousal support, knowledge, attitude, and access to healthcare. Community-based interventions emphasizing family engagement, health education, and empowerment of primary healthcare workers are crucial to improving national screening coverage and achieving equitable cancer prevention outcomes.

Keywords: cervical cancer, screening, determinants, Indonesia, systematic review, meta-analysis.

Sociocultural Barriers and Diagnostic Challenge in Unmarried Young Woman with Endometrial Tuberculosis

Nisa Utami Ika Permatasari¹, Sarrah Ayuandari¹, Shofwal Widad¹, Shinta Prawitasari¹

¹Department of Obstetrics and Gynecology, Faculty of Medicine, Public Health and Nursing,
Universitas Gadjah Mada

Correspondence: nisauip@gmail.com

ABSTRACT

Background: Endometrial tuberculosis (ETB) remains an underrecognized cause of abnormal uterine bleeding among women of reproductive age, particularly in high TB-burden countries like Indonesia. ETB is challenging because its clinical, radiological, and intraoperative appearances overlap with common gynecological conditions, leaving histopathology as the only reliable confirmatory modality. Sociocultural dynamics add complexity; stigma faced by young unmarried women seeking gynecological care, combined with limited awareness that TB can manifest gynecologically, keeps clinical suspicion low and delays care.

Case: We report a 28-year-old unmarried woman who came to us with nearly a year of recurring lower abdominal pain and abnormal uterine bleeding. She had initially been seen at a referring hospital where ultrasound findings pointed toward endometrial hyperplasia and hormonal therapy was commenced but brought no relief. At our tertiary center, pelvic MRI showed hematometra. Hysteroscopy revealed diffuse endometrial thickening throughout the uterine cavity mimicking endometrial hyperplasia with vascularization. It was only when histopathology came back showing granulomatous inflammation that the diagnosis was made. She is now treated with anti tuberculosis (Rifampicin 450mg, Ethambutol 1000mg, Isoniazid 300mg, Pyrazinamid 1250mg) combined with cyclical norethisterone 5mg bid.

Conclusion: This case illustrates that diagnostic delay was not a failure of process but a reflection of how convincingly ETB mimics other conditions at every stage. For young unmarried women, stigma may delay the first visit, but the deeper problem is that ETB rarely enters the differential even when care is sought. A low threshold for histopathological sampling in any woman with treatment-refractory abnormal uterine bleeding, regardless of age, marital status, or presumed risk profile, remains the most important step to close this diagnostic gap before irreversible reproductive harm occurs.

Keywords: female genital tuberculosis, endometrial tuberculosis, abnormal uterine bleeding, social stigma, diagnostic challenge

Prevalence of Postpartum Hemorrhage and Associated Obstetric and Socio-Demographic Risk Factors in Indonesia: A Systematic Review and Meta-Analysis

dr. Supanji Raharja

ABSTRACT

Background: Postpartum hemorrhage (PPH) is a major cause of maternal morbidity and mortality. In Indonesia, reported PPH prevalence and its associated risk factors vary across settings and study designs. This study aims to estimate the pooled prevalence of PPH in Indonesia and to quantify associations between PPH and selected obstetric and socio-demographic risk factors.

Methods: We conducted a systematic review of Indonesian primary studies and extracted quantitative data for meta-analysis. Facility-based denominators were pooled to estimate PPH prevalence using random-effects models with logit transformation. Associations between candidate predictors and PPH were pooled as odds ratios (ORs) using random-effects meta-analysis on the log scale. Statistical heterogeneity was assessed using I^2 , and sensitivity analyses were performed to evaluate the impact of outlying prevalence estimates.

Results: Seven facility-based prevalence data points (16,533 deliveries) were included. The pooled PPH prevalence was 4.38% (95% CI 1.54%–11.84%) with very high heterogeneity ($I^2=99.44\%$). After excluding one high-prevalence outlier, pooled prevalence was 3.05% (95% CI 1.64%–5.61%). In pooled risk-factor analyses, PPH was associated with anemia (9 studies; OR 2.93, 95% CI 2.11–4.05), high-risk maternal age (7 studies; OR 4.25, 95% CI 1.72–10.53), high parity (5 studies; OR 5.48, 95% CI 2.86–10.50), and short birth spacing (5 studies; OR 2.55, 95% CI 1.84–3.53). Prolonged labor was positively associated with PPH (5 studies; OR 2.12, 95% CI 1.16–3.87). Additional obstetric predictors (including oxytocin use, labor induction, episiotomy, and birth canal laceration) were supported by single-study estimates.

Conclusions: Reported PPH prevalence in Indonesia differs widely across settings, underscoring the need for more standardized surveillance. Across studies, anemia, high parity, high-risk maternal age, and short birth spacing emerged as robust correlates of PPH. Strengthening antenatal anemia prevention and targeted risk screening may help reduce PPH burden.

Comprehensive Multidimensional Analysis of Adolescent Pregnancy and ITS Determinants at RSUD Ulin Teaching and Referral Hospital: A mixed – Methods Study

Meikristian¹, Renny Aditya²

¹Obstetric and Gynecology Residency Programme -1;

²Obstetric and Gynecology Departement, Obstetrics and Gynecology Social Division
Lambung Mangkurat University – Ulin Hospital - Banjarmasin

Banjarmasin – South Borneo

Correspondence: meikristian424@gmail.com

Hp. 082353183420

ABSTRACT

Background: Ulin Regional General Hospital (RSUD Ulin), Banjarmasin, is a teaching hospital and referral centre in South Kalimantan that manages a wide spectrum of high-risk pregnancies, including adolescent pregnancies. Adolescent pregnancy is associated with increased maternal and neonatal complications, making it essential to analyse related factors such as sociodemographic characteristics, knowledge, and family support.

Methods: This study used a descriptive design with an analytic approach within a convergent mixed-methods framework. Fifty pregnant adolescents at RSUD Ulin in 2025 were included. Quantitative analysis comprised normality and homogeneity tests, followed by Spearman correlation to assess relationships among key variables, with statistical significance set at $p < 0.05$. In-depth semi-structured interviews with a purposive subsample of adolescents and key informants were conducted, transcribed verbatim, and thematically analysed to capture experiences and contextual determinants of adolescent pregnancy.

Results: Most respondents were aged 19–20 years (50.0%), had senior high school education (54.0%), and were unemployed (92.0%). Although the majority of pregnancies were classified as low risk (62.0%), 46.0% had potential obstetric emergencies (APGO), and 42.0% had never attended antenatal care. Maternal age showed strong positive correlations with reproductive health knowledge ($\rho = 0.786$; $p < 0.01$) and contraceptive knowledge ($\rho = 0.762$; $p < 0.01$). Family support was strongly positively correlated with reproductive health knowledge ($\rho = 0.718$; $p < 0.01$). Pregnancy risk status was positively correlated with obstetric emergency risk ($\rho = 0.603$; $p < 0.01$) and negatively correlated with reproductive health knowledge ($\rho = -0.486$; $p < 0.01$). Reproductive health knowledge was very strongly correlated with contraceptive knowledge ($\rho = 0.840$; $p < 0.01$).

Conclusion: Knowledge and family support play crucial roles in adolescent pregnancy risk. Enhancing reproductive and contraceptive health education, strengthening family support, increasing ANC uptake, and reinforcing the referral and preventive roles of RSUD Ulin are essential to reduce obstetric risks among adolescents.

Keywords: adolescent pregnancy; pregnancy risk; reproductive health knowledge; family support; obstetric emergency

Anemia in Pregnancy at the Primary Care Level: A 2024 Retrospective Study

¹Ummu Khonsa, ¹Murtiningsih, ²Cindy Ayudia Pramaesti, ³Ariva Syiva'a, ⁴Azzedin Aslam

¹Klinik Utama Sri Murti Husada, Surakarta, Indonesia

²Karima Utama Hospital, Surakarta, Indonesia

³Arvita Bunda Maternal and Child Hospital, Yogyakarta, Indonesia

⁴Sebelas Maret University, Surakarta, Indonesia

Email: ummukhonsa022@gmail.com

ABSTRACT

Introduction: Anemia in pregnancy remains a major global public health problem, affecting approximately 38% of pregnant women worldwide. It is associated with adverse maternal and neonatal outcomes, including low birth weight, preterm delivery, and increased maternal mortality. This study aimed to determine the prevalence and characteristics of anemia among pregnant women at a primary health care center.

Methods: This study used a descriptive retrospective design. Secondary data were collected from medical records of pregnant women attending antenatal care at Kedawung 1 Primary Health Care Center from January to December 2024. Inclusion criteria were pregnant women who underwent hemoglobin examination. Anemia was defined as hemoglobin level <11 g/dL and classified according to WHO criteria. Data were analyzed using univariate analysis and presented as frequency distributions.

Discussion: A total of 106 pregnant women were included. The prevalence of anemia was 8.5%, all of which were mild anemia, with no cases of moderate or severe anemia. Most respondents were aged 20–35 years (82.1%) and in the first trimester of pregnancy (69.8%). The prevalence in this study was lower than the national average, suggesting relatively good antenatal care coverage and iron supplementation adherence. However, anemia was still observed in high-risk age groups (<20 and >35 years). Physiological hemodilution and increased nutritional demand during pregnancy may contribute to anemia occurrence.

Conclusion: The prevalence of anemia among pregnant women at Kedawung 1 Primary Health Care Center in 2024 was 8.5%, predominantly mild anemia. Continuous screening, nutritional education, and adherence to iron supplementation are essential to prevent anemia and its complications.

Keywords: anemia in pregnancy; primary health care

Bahaya Tersembunyi Obstructive Sleep Apnea: Tinjauan Sistematis dan Meta-Analisis Dampak OSA pada Kehamilan serta Peran Penting Skrining Layanan Primer

Agda Shaskia Dewanti¹, Nadira Chandrasasi Mahadewi¹, Dianita Putri Utami¹

¹Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan Universitas Gadjah Mada
Email: shaskia.dewanti.sd@gmail.com

ABSTRAK

Latar belakang: Obstructive Sleep Apnea (OSA) pada kehamilan memicu hipoksia intermiten dan lonjakan simpatis yang berpotensi meningkatkan morbiditas maternal serta neonatal. Penelitian ini bertujuan untuk mengevaluasi dampak OSA secara komprehensif terhadap luaran maternal dan neonatal.

Metode: Tinjauan sistematis dilakukan pada basis data PubMed, Springerlink, Cochrane, dan Scopus dari data multi-center (2016–2026) sesuai panduan PRISMA. Analisis melibatkan studi observasional yang menilai hubungan OSA dengan luaran maternal-neonatal. Risiko bias dievaluasi dengan instrumen ROBINS-E, sementara meta-analisis menggunakan Random Effects Model pada RevMan 5.4 dengan ukuran efek Odds Ratio (OR) dan CI 95%. Heterogenitas antar studi dinilai menggunakan I². Signifikansi statistik ditentukan berdasarkan nilai $P < 0,05$.

Hasil diskusi: Analisis 16 studi ($n=87.803.711$) menunjukkan OSA merupakan faktor risiko signifikan morbiditas berat untuk maternal dan neonatal. OSA secara signifikan meningkatkan risiko komplikasi kardiovaskular maternal, meliputi gagal jantung (OR 4,71; $P<0,00001$), kardiomiopati (OR 4,16; $P<0,00001$), dan edema paru (OR 3,96; $P<0,00001$). Risiko gangguan hipertensi meningkat dua kali lipat, dengan risiko eklampsia (OR 2,31; $P<0,0001$), preeklampsia (OR 2,03; $P<0,00001$), dan hipertensi gestasional (OR 1,57; $P<0,00001$). Selain itu, ditemukan peningkatan risiko GDM (OR 1,65; $P<0,00001$) serta tindakan bedah sesar (OR 1,65; $P=0,0003$). Dalam konteks luaran neonatal, OSA meningkatkan risiko admisi NICU (OR 2,81; $P=0,001$) dan persalinan prematur (OR 1,35; $P<0,00001$). Namun, OSA tidak berpengaruh signifikan terhadap skor APGAR, IUGR, IUFD, emboli paru maternal, dan depresi maternal.

Kesimpulan: OSA secara signifikan memperburuk luaran maternal dan neonatal. Deteksi dini di layanan primer menggunakan kuesioner praktis seperti STOP-BANG, Berlin, atau Epworth Sleepiness Scale (ESS) sangat krusial sebagai strategi preventif komplikasi kehamilan.

Kata kunci: OSA, kehamilan, luaran maternal, luaran neonatal

Analysis of Referral Patterns in Maternal Mortality Cases at Dr. Kariadi Hospital Semarang Period 2023-2024

Arina Pramudita Triasti¹, Ratnasari Dwi Cahyanti²

¹Obstetric and Gynecology Resident, Faculty of Medicine, Universitas Diponegoro, Semarang, Indonesia

²Social Obstetrics and Gynecology Division, Department of Obstetric and Gynecology, Dr. Kariadi General Hospital, Faculty of Medicine, Universitas Diponegoro, Semarang, Indonesia

ABSTRACT

Background Maternal Mortality Rate (MMR) remains a key indicator of health system performance in Indonesia. One critical strategy to reduce MMR is a functional referral system. However, the current maternal referral system is not optimal yet. This study aimed to analyze referral patterns in maternal death cases at Dr. Kariadi General Hospital, Semarang.

Methods A cross-sectional study design was used. Data were obtained from medical records of all maternal death cases at Dr. Kariadi Hospital between January 2023 and December 2024. A total of 64 cases were included. The study examined variables related to patient characteristics and referral attributes. Univariate analysis was performed to describe frequency distributions, percentages, pregnancy complications, and the referral process.

Results Most maternal deaths occurred in women aged 20–35 years, with gestational age predominantly between 20–27 weeks (40.6%). Parity ranged from 1 to 4, and 53.1% of deaths occurred during the postpartum period. The majority of referrals came from private hospitals (42.2%) and government hospitals (40.6%). The leading diagnosis was obstetric hemorrhage (40.6%), followed by other causes (40.6%). Appropriate stabilization was performed in 87.5% of cases, and 90.6% of patients were transported using ambulances. A total of 73.4% of patients were referred in a timely referrals, with all referrals receiving a response time of 10 minutes or less.

Discussion Referral patterns were evaluated from several aspects: origin of referral, pre-referral stabilization, administrative documentation, referral preparation, reception procedures, and overall referral system efficiency. While the referral response time and emergency transport systems were functioning well, challenges persist in the capacity of referring facilities, especially in stabilization and inter-facility communication.

Conclusion Although the referral process is generally well-implemented, most patients arrived in critical condition. Improving early risk detection, improving healthcare worker training, and optimizing the referral system are essential to effectively reduce maternal mortality.

Keyword: Maternal mortality, referral system, referral patterns

Kehamilan Remaja dengan Infeksi HIV: Pendekatan Holistik dan Kearifan Lokal dalam Penanganan dan Pencegahan Risiko Kesehatan

Indri K. T Runtuwene, Joice M. M Sondakh, Hermie M. M Tendeau, Erna Suparman, Anastasia M. Lumentut

Bagian / KSM Obstetri Ginekologi

Fakultas Kedokteran Universitas Sam Ratulangi

RSUP Prof. Dr. R.D. Kandou Manado

Korespondensi : indriruntuwene@yahoo.com, +6285395599809

ABSTRAK

Latar Belakang: Kehamilan remaja merupakan masalah kesehatan reproduksi yang kompleks berkaitan dengan peningkatan risiko medis, sosial, dan psikologis, terlebih bila disertai infeksi HIV. Kondisi ini tidak hanya meningkatkan risiko komplikasi pada ibu, tetapi juga memperburuk luaran perinatal termasuk transmisi vertikal HIV, anemia, persalinan berisiko tinggi, dan gangguan pertumbuhan janin.

Kasus: Remaja berusia 14 tahun dengan kehamilan risiko tinggi dan infeksi HIV. Pasien memiliki latar belakang sosial-ekonomi rendah, pendidikan sangat terbatas, riwayat aktivitas seksual sejak usia 12 tahun, berganti pasangan. Selama kehamilan, pasien mengalami status gizi kurang dengan indeks massa tubuh rendah, kenaikan berat badan tidak adekuat, dan anemia, yang semakin meningkatkan risiko obstetrik dan neonatal dan akhirnya menyebabkan KPD. Pada pasien dilakukan manajemen persalinan secara seksio sesaria dan diikuti dengan pemberian ART.

Pembahasan: Kasus ini menegaskan pentingnya pendekatan holistik yang mencakup tata laksana medis (ARV, pemantauan klinis, perencanaan persalinan), edukasi kesehatan reproduksi, pencegahan perilaku seksual berisiko, serta dukungan psikososial untuk mengurangi stigma dan meningkatkan kepatuhan terapi. Integrasi kearifan lokal relevan untuk memperkuat penerimaan keluarga dan komunitas, meningkatkan efektivitas edukasi, dan membangun lingkungan suportif bagi remaja hamil berisiko tinggi.

Kesimpulan: Kehamilan remaja dengan infeksi HIV merupakan kondisi berisiko tinggi yang membutuhkan deteksi dini, tata laksana multidisiplin, edukasi kesehatan reproduksi berbasis bukti, serta dukungan keluarga dan komunitas. Integrasi layanan kesehatan reproduksi, pencegahan HIV, dan pendekatan berbasis kearifan lokal penting untuk menurunkan risiko komplikasi maternal, perinatal, serta dampak jangka panjang bagi remaja.

Kata kunci: Kehamilan remaja, HIV, Pendekatan holistik, Kearifan lokal

Delayed Detection, Fatal Outcomes: A Case Of Fundal Uterine Rupture Remote from Prior Cesarean Section Scar with Severe Preeclampsia and IUFD As A Reflection of Social Obstetrics Implementation

Meidya Mukarramah¹, Pom Harry Satria²

¹Obstetric and Gynecology Specialist Education Program, Faculty of Medicine Andalas University, Padang, West Sumatra, Indonesia

²Sungai Dareh General Hospital, Dharmasraaya, West Sumatra, Indonesia

ABSTRACT

INTRODUCTION: Fundal uterine rupture is a rare but catastrophic obstetric complication. While most cases are associated to prior cesarean section scars, rupture at a site remote from the previous scar is uncommon and poses a greater diagnostic challenge, often leading to delayed recognition and intervention. Severe preeclampsia further increases maternal fetal morbidity through multisystem endothelial dysfunction and placental insufficiency increasing risk of adverse outcome including intrauterine fetal death (IUFD).

CASE: A 37-year-old woman (G4P2A1L1) at 37-38 weeks of gestation was referred from a primary healthcare facility with severe preeclampsia. She presented with pelvic pain referred to groin one day before admitted, followed by sudden severe abdominal pain one hour prior to admission. Antenatal care was suboptimal, consisting of three visits to a midwife and one visit to an obstetrician, without participation in maternal education programs. She had a history of one previous cesarean section performed through a low transverse uterine incision and obesity. Clinical findings suggested suspected uterine rupture with intrauterine fetal demise in breech presentation.

DISCUSSION: This case illustrates the combined impact of clinical and social determinants in obstetric emergencies. Hypertensive disorders and obesity are well-established contributors to uterine rupture and poor perinatal outcomes. Inadequate antenatal care and lack of maternal education reflect delayed recognition of complications, while referral barriers indicate issues in accessing care. The critical condition upon arrival suggests challenges in immediate management. Strengthening integrated care systems, early risk identification, and community-based interventions are essential to prevent similar outcomes.

CONCLUSION: Fundal uterine rupture in high-risk pregnancies represents not only a clinical emergency but also a manifestation of systemic and social gaps in maternal care. Enhancing social obstetrics through improved antenatal coverage, timely referral systems, and community engagement is crucial to reducing maternal and perinatal mortality.

Keywords: fundal uterine rupture, severe preeclampsia, three delays, IUFD, maternal mortality

Concealed Adolescent Pregnancy Leading to Maternal Near Miss: A Case of Eclampsia with Placental Abruption Intrauterine, Fetal Death and Multi-Organ Dysfunction as A Reflection of Social Stigma, Delay in Care and Health System Gaps

Muthiah Ramadhani Agus¹, Mutiara Islam²

¹Obstetric and Gynecology Specialist Education Program, Faculty of Medicine Andalas University, Padang, West Sumatra, Indonesia

²RSUD Prof. H. Muhammad Yamin SH, Pariaman, West Sumatra, Indonesia

ABSTRACT

INTRODUCTION: Adolescent pregnancy is a global health concern associated with increased maternal morbidity and mortality. Beyond biological factors, social determinants such as stigma toward out-of-wedlock pregnancy, gender inequality, and limited access to healthcare significantly influence care-seeking behavior. Concealed pregnancy in adolescents reflects a failure of both social and health systems to detect pregnancy early, contributing to delays in care and increasing the risk of severe obstetric complications, including maternal near miss.

CASE: A 16-year-old female, (G1P0A0H0) at 26–27 weeks of gestation, presented to the emergency department with seizures. The pregnancy was unknown to her family, as the patient had concealed it using a corset and had not attended any antenatal care. She was diagnosed with eclampsia complicated by placental abruption and intrauterine fetal death (IUFD). An emergency cesarean section was performed, with intraoperative findings confirming placental abruption. Postoperatively, the patient was admitted to the intensive care unit with severe anemia (hemoglobin 5.0 g/dL), thrombocytopenia, and acute kidney injury (AKI). She received blood transfusions and intensive supportive management. This case fulfilled the criteria for maternal near miss due to multi-organ dysfunction.

DISCUSSION: This case highlights the complex interplay between social determinants and adverse obstetric outcomes. Social stigma and adolescent vulnerability contributed to pregnancy concealment, resulting in lack of antenatal care and delay in seeking care (delay type 1). In addition, gaps in the healthcare system, particularly the absence of adolescent-friendly services and community-based early detection, further exacerbated the condition. Consequently, unrecognized risk factors progressed into severe complications.

CONCLUSION: Concealed adolescent pregnancy represents a failure of social and healthcare systems in protecting vulnerable populations. A comprehensive social obstetrics approach is essential, including reproductive health education, stigma reduction, adolescent-friendly healthcare services, and community-based early detection strategies to prevent maternal near miss

Keyword: Adolescent pregnancy, concealed pregnancy, social stigma, delay in care, maternal near miss

Fulminant Peripartum Cardiomyopathy Complicated by Sepsis and Multi-Organ Dysfunction: A Fatal Postpartum Case Rapidly Progressive Peripartum Cardiomyopathy with Concurrent Sepsis Leading to Fatal Outcome: A Case Report

Marisa Ummil Firdaus
Universitas Hang Tuah Surabaya

ABSTRACT

Introduction: Peripartum cardiomyopathy (PPCM) is a rare but potentially fatal cause of heart failure occurring in late pregnancy or the postpartum period. Its presentation may overlap with other cardiopulmonary conditions, complicating early diagnosis and management.

Case Illustration: A 40-year-old multiparous woman presented three days postpartum with acute dyspnea and severe hypoxemia. Initial evaluation suggested suspected PPCM with differential diagnoses of heart failure and pneumonia. Despite oxygen therapy, diuretics, and guideline-directed management, her condition rapidly deteriorated, requiring intubation and mechanical ventilation. The clinical course progressed to respiratory failure complicated by pneumonia, sepsis, septic shock, and multi-organ dysfunction. The patient ultimately developed bradycardia followed by asystole and was declared deceased.

Discussion: This case demonstrates a fulminant presentation of suspected PPCM with rapid deterioration exacerbated by infection and systemic inflammatory response. The coexistence of cardiac dysfunction and sepsis likely contributed synergistically to hemodynamic instability and poor outcome. Delayed presentation and overlapping clinical features may further complicate diagnosis and management in postpartum patients.

Conclusion: PPCM may present with severe and rapidly progressive complications, particularly when accompanied by infection. Early recognition, prompt evaluation, and comprehensive management are critical to improving patient outcomes.

Keywords: peripartum cardiomyopathy, postpartum, heart failure, sepsis, case report

Effectiveness of Obstetric Safety Bundles for Reducing Maternal Severe Hypertension Related Mortality in Tertiary Hospitals: A Systematic Review

Doddy Fernando Pausoan Gultom^{1,2}

¹Department of Obstetrics and Gynecology, Tarakan General Hospital, Central Jakarta, Indonesia

²Faculty of Medicine, Krida Wacana Christian University (UKRIDA), Jakarta, Indonesia

Correspondence Author. Doddy Fernando Pausoan Gultom. Department of Obstetrics and Gynecology, Tarakan General Hospital, Central Jakarta, Indonesia.

Email: doddydr@gmail.com

ABSTRACT

Background: Severe hypertension in pregnancy remains one of the leading causes of maternal mortality worldwide, accounting 6.4% up to 31.6% maternal deaths. Despite established treatment guidelines, delays and inconsistencies in management continue to result in poor outcomes. The implementation of structured patient safety bundles has emerged as a strategy to standardize care and improve maternal survival.

Purpose: We aimed to evaluate the effectiveness of severe hypertension safety bundles in improving emergency management and reducing maternal deaths.

Methods: The literature search was conducted using four databases and yielded 713 articles. After thorough screening, we selected six studies for inclusion. We evaluated the hypertension-associated mortality after safety bundles implementation.

Results: Qualitative analysis of the six studies with total 1,258,084 deliveries, 288 health provider, and more than 111 hospitals in included studies revealed that all of the safety bundles in severe hypertension reduced maternal deaths significantly. Hospitals adopting structured algorithms, checklists, and team-based interventions reported substantial reductions in treatment delays and hypertension-related complications. The bundle is structured around four key domains: readiness, recognition and prevention, response, and reporting and systems learning which linked to a higher proportion of patients receiving prompt treatment for severe hypertension.

Conclusion: Implementing safety bundles for severe hypertension in pregnancy has significantly reduced maternal deaths by ensuring timely recognition, rapid treatment, and coordinated response.

Keywords: maternal death, maternal mortality, safety bundle, severe hypertension

Tranexamic Acid as a Prophylactic for Postpartum Hemorrhage Prevention in Obstetric Care: A Systematic Review and Meta-Analysis

Nadira Chandrasasi Mahadewi¹, Resdenia Widya Choirul Uma², Hani Fakhrunnisa², Putri Nawasari Silawarti¹

¹Faculty of Medicine, Public Health, and Nursing Universitas Gadjah Mada

²Faculty of Medicine and Health Science, Universitas Muhammadiyah Yogyakarta

E-mail: nadir.aachandra@gmail.com

ABSTRACT

Background: Postpartum hemorrhage (PPH) remains a leading cause of maternal morbidity and mortality worldwide. Tranexamic acid (TXA) is an antifibrinolytic agent that has been widely recommended for the treatment of PPH, however its routine prophylactic use remains unclear. This study aimed to evaluate the effectiveness and safety of prophylactic TXA in reducing blood loss and PPH incidence.

Methods: Literature search was conducted using PubMed, SpringerLink, Cochrane, Scopus, and Sciencedirect (2016-2026) following the PRISMA guidelines. Randomized controlled trials (RCT) comparing prophylactic TXA with placebo or standard care in pregnant women were included. Risk of bias was assessed using Cochrane Risk of Bias 2 (RoB 2) tool. Meta-analysis was performed using RevMan 5.4 with a random-effects model.

Results and Discussion: This study included 13 RCTs (12,359 participants). Prophylactic TXA significantly reduced total blood loss (MD -77.55 mL; 95%CI -108.07 to -47.04; $p < 0.001$) and decreased the incidence of PPH (OR 0.62; 95%CI 0.46–0.83; $p = 0.001$), although substantial heterogeneity was observed. This heterogeneity may be attributed to variations in patient characteristics and TXA administration protocols. Subgroup analyses demonstrated consistent benefits in both cesarean and vaginal deliveries, with greater reductions observed among cesarean sections. Post-delivery hemoglobin levels were significantly higher in the TXA group (MD 0.25 g/dL; 95%CI 0.05–0.45; $p = 0.01$), and blood transfusion requirement was reduced. No significant increase in thromboembolic events was observed, although nausea and vomiting were more frequent in TXA group.

Conclusion: Prophylactic TXA was associated with reduced blood loss, lower PPH incidence, and decreased transfusion requirement, without a significant increase in thromboembolic events. These results support consideration of TXA as a preventive option for PPH in obstetric practice. Further studies are needed to evaluate the effectiveness of prophylactic TXA according to individual patient risk profiles.

Keywords: Tranexamic acid, prophylactic, postpartum hemorrhage, blood loss

Effect of Community-Based Referral and Social Support Interventions on Obstetric Care Utilization and Maternal Outcomes in Low- and Middle-Income Countries: A Systematic Review Protocol

^{1,2}Catalya Christina Cantika, ³Heika Natasha Silitonga, ¹Lolinia Agustina Florensia, ¹Monica Widya Pasaribu

¹Faculty of Medicine, Krida Wacana Christian University

²General Practitioner, Bethsaida Hospital Serang, Serang, Banten, Indonesia

³Department of Obstetrics and Gynecology, Bethsaida Hospital Serang, Serang, Banten, Indonesia

ABSTRACT

Background: Maternal mortality and morbidity remain disproportionately high in low- and middle-income countries (LMICs), where delays in recognizing complications, reaching health facilities, and receiving timely obstetric care continue to undermine preventable survival gains. Community-based referral and social support interventions—such as community health worker–led navigation, birth companionship, social accompaniment, and community-supported transport—have been widely implemented to reduce access barriers. Despite their scale-up across diverse LMIC contexts, evidence regarding their effectiveness on obstetric service utilization and maternal outcomes remains fragmented, intervention-specific, and insufficiently synthesized to guide policy and scale-up decisions.

Methods: This systematic review protocol follows PRISMA-P guidelines. We will include randomized controlled trials, quasi-experimental studies, cohort studies, cross-sectional studies, and mixed-methods studies with extractable quantitative data, published between 2010 and 2026 in English. The population includes pregnant, laboring, or postpartum women residing in LMICs. Primary outcomes are obstetric care utilization indicators, including facility-based delivery, antenatal care attendance, postnatal care attendance, and timely referral. Secondary outcomes include maternal morbidity and maternal mortality. Searches will be conducted in PubMed/MEDLINE, Cochrane CENTRAL, ScienceDirect, and ProQuest, supplemented by backward and forward citation tracking to enhance comprehensiveness. Two independent reviewers will conduct study selection, data extraction, and risk of bias assessment (RoB 2 and ROBINS-I). Random-effects meta-analysis will be performed where clinically and methodologically appropriate.

Discussion: This review will provide the first structured synthesis explicitly examining community-based referral and social support mechanisms as distinct drivers of obstetric care utilization in LMICs. By identifying intervention models consistently associated with improved service uptake and maternal outcomes, the findings aim to inform prioritization, resource allocation, and scalable maternal health strategies.

Conclusion: By consolidating fragmented evidence into actionable insights, this review seeks to strengthen the empirical basis for community-driven approaches to reducing preventable maternal risk in LMICs.

Keywords: maternal health; community-based referral; social support; service utilization; LMIC

Dietary Pattern, Menstrual Characteristics, and Anemia in Adolescent Girls: Implications for Reproductive Health Integration in Cultural Contexts

Aqsha Wijaya
UIN Syarif Hidayatullah Jakarta

ABSTRAK

Latar Belakang: Anemia pada remaja putri masih menjadi salah satu masalah kesehatan Indonesia. Karakteristik menstruasi menjadi salah satu faktor pemicu anemia akibat peningkatan kebutuhan zat besi selama pubertas dan kehilangan darah saat menstruasi. Namun, pola diet juga menjadi faktor pemicu kuat terjadinya anemia. Saat ini, bukti yang mengintegrasikan faktor diet dan karakteristik menstruasi dalam satu kerangka analitik masih terbatas. Tujuan tinjauan sistematis ini adalah untuk mengevaluasi hubungan antara faktor diet dan karakteristik menstruasi dengan anemia, kadar hemoglobin, dan defisiensi zat besi pada remaja putri.

Metode: Proses pencarian artikel dilakukan dengan PubMed, Scopus dan ScienceDirect. Populasi penelitian adalah remaja putri usia 10–19 tahun yang sudah menstruasi. Kriteria inklusi berupa: (1) artikel orisinal dengan desain studi yaitu studi cohort dan cross-sectional (2) literatur harus diterbitkan dalam sepuluh tahun terakhir dari tahun 2016 hingga 2026, (3) menggunakan bahasa Inggris atau bahasa Indonesia, dan (4) literatur dapat diakses lengkap secara online. Luaran yang dianalisis mencakup anemia, kadar hemoglobin, dan status defisiensi besi.

Hasil: Dari total 63 artikel yang diidentifikasi, 10 artikel dilibatkan dalam review ini. Asupan zat besi yang tidak adekuat, rendahnya konsumsi sumber heme iron, serta dietary diversity yang rendah, memiliki pengaruh signifikan dengan peningkatan risiko anemia dan defisiensi besi. Menstruasi yang lebih panjang dan pengeluaran darah yang banyak merupakan determinan independen anemia. Beberapa studi menunjukkan terdapat efek antara pola diet berisiko dan perdarahan menstruasi hebat, meningkatkan kemungkinan defisiensi besi. Faktor sosioekonomi dan budaya memiliki pengaruh kuat terhadap pola diet remaja.

Kesimpulan: Anemia pada remaja putri yang telah menstruasi merupakan hasil interaksi antara pola diet dan karakteristik menstruasi. Intervensi pola diet dan edukasi kesehatan reproduksi berbasis praktik budaya lokal diperlukan untuk pencegahan anemia serta optimalisasi kesehatan reproduksi wanita jangka Panjang.

Kata kunci: remaja putri, anemia, pola diet, menstruasi.

Maternal Infection Related Inflammation and Adverse Pregnancy Outcomes: Implications for Reducing Maternal and Neonatal Mortality – A Systematic Review

Vida Dwi Novinda Sari¹, Vida Cahlia Novita Sari²

¹Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan, Universitas Gadjah Mada, Yogyakarta

²Fakultas Kedokteran, Universitas Airlangga, Surabaya

ABSTRACT

Background: Maternal infections significantly contribute to maternal and neonatal morbidity and mortality worldwide. Increasing evidence suggests that inflammation-mediated placental dysfunction, rather than direct pathogen effects, represents the primary mechanism underlying adverse pregnancy outcomes.

Methods: A systematic search of PubMed, Springer, and Scopus for studies published in English between 2010 and 2025. Eligible studies included pregnant women with confirmed maternal infections and reported outcomes such as preterm birth, low birth weight, stillbirth, neonatal mortality, or severe maternal complications. Study selection followed PRISMA guidelines. Data were extracted and synthesized narratively due to substantial clinical and methodological heterogeneity.

Discussion: Nineteen eligible studies were included, with malaria and viral infections as the predominant etiologies. Maternal infection was consistently associated with increased risks of preterm birth, low birth weight, stillbirth, and neonatal mortality. Severe infections were linked to higher maternal morbidity and demonstrated a dose–response relationship with adverse outcomes, corresponding to greater systemic inflammatory burden. Overall, the findings support systemic maternal inflammation as the principal mechanism underlying infection-related adverse pregnancy outcomes. Inflammatory cascades may disrupt placental function, impair uteroplacental perfusion, and prematurely activate labor pathways, rather than adverse outcomes being solely attributable to direct pathogen effects. This mechanistic framework highlights the importance of early detection and timely therapeutic intervention to reduce preventable maternal and neonatal morbidity and mortality.

Conclusion: Maternal infections markedly increase the risk of adverse pregnancy outcomes, primarily through inflammation-mediated pathways. Optimizing antenatal screening and early therapeutic interventions is essential to reduce maternal and neonatal morbidity and mortality.

Keywords: maternal infection, inflammation, adverse pregnancy outcomes, preterm birth, neonatal mortality.

Effectiveness of Integrating Local Wisdom Practices (Traditional Birth Attendants and Local Cultural Practices) with Modern Reproductive Health Services in Reducing Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR): A Systematic Review (2020–2025)

Michelle Grady Evangelli¹, Nabila Divandra Kusuma¹, Satrio Pinayungan¹, Muhammad Yusuf^{1,2}

¹Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

²Rumah Sakit Umum Daerah Dr. Soetomo, Surabaya, Indonesia

ABSTRACT

Background: Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) remain significant global health challenges, particularly in low and middle income countries where cultural practices and limited access to formal healthcare intersect. Integrating local wisdom practices, such as traditional birth attendants (TBAs) and culturally rooted care, with modern reproductive health services has emerged as a promising strategy to improve maternal and neonatal outcomes.

Objectives: This systematic review aims to evaluate the effectiveness of integrating local wisdom practices with modern reproductive health services in reducing maternal mortality rate (MMR) and infant mortality rate (IMR).

Methods: A systematic literature search of six databases was conducted following PRISMA guidelines, searched systematically to identify quantitative, qualitative, and mixed methods studies published in 2020-2025. A total 337 records were found, out of which 265. Finally, six studies met the inclusion criteria and were selected for analysis.

Results: All included studies reported positive or slightly positive effects of integration. A cluster randomized controlled trial in Mexico demonstrated a significant reduction in adverse maternal and neonatal outcomes (RD -0.06, 95% CI -0.09 to -0.02). In Nigeria, integration of TBAs into the formal health system reduced MMR (212 to 147 per 100,000) and increased facility deliveries (61.8%). Programs in Guatemala and Malawi improved early detection of complications, referral rates, and data quality. A policy-based partnership in Indonesia showed reduced MMR and increased trust in formal healthcare. Although some studies reported non-significant reductions in morbidity, overall trends consistently favored integrated approaches. Key challenges included cultural resistance, coordination gaps, and resource limitations.

Conclusion: Integration of local wisdom practices with modern reproductive health services is an effective and culturally appropriate strategy to improve maternal and neonatal outcomes. Strengthening collaboration, training, and health system support is essential for sustainable implementation.

Keywords: Local Wisdom, Maternal Mortality Rate, Infant Mortality Rate, Integrated Care, Reproductive Health Services

Beyond Treatment: The Impact of Insurance Coverage Gaps on Adherence and Clinical Outcomes in Women with Prolactinoma-Induced Amenorrhea—A Descriptive Clinico-Social Case Series

Muhammad Rakha Nabil Abiyyu Hanum¹, Budi Haryadi Prasetyoaji², Sarrah Ayuandari², Shinta Prawitasari², Shofwal Widad²

¹Medical Profession Program Faculty of Medicine Universitas Gadjah Mada, Yogyakarta, Indonesia

²Department of Obstetrics and Gynaecology Faculty of Medicine Universitas Gadjah Mada, Sardjito General Hospital, Yogyakarta, Indonesia

ABSTRACT

Background: Prolactinoma is a highly treatable cause of amenorrhea and infertility; however, real-world outcomes may be limited by healthcare access, particularly insurance coverage, which can influence treatment choice and continuity.

Objective: To evaluate the association between insurance coverage gaps, treatment patterns, and clinical outcomes in women with prolactinoma-induced amenorrhea.

Methods: A descriptive clinico-social case series of nine women (aged 18–33 years) was conducted. Clinical outcomes were analysed alongside healthcare access factors, including insurance-related barriers, MRI access, treatment continuity, and adherence. Suboptimal outcomes were defined as persistent amenorrhea, delayed menstrual recovery (>6 months), or fluctuating prolactin levels despite therapy.

Results: Seven patients had pituitary adenomas (four microadenomas, three macroadenomas), while two had hypogonadotropic conditions. All hyperprolactinemia patients received dopamine agonist therapy. Insurance coverage influenced treatment selection: bromocriptine (covered) was predominantly used in patients with insurance constraints, whereas cabergoline (not covered) was more often used when access was not limited. Overall, median prolactin decreased from 202 to 40 ng/mL following treatment, indicating biochemical response across groups. However, 4/9 (44.4%) experienced suboptimal clinical outcomes. Among these, three patients had insurance-related barriers associated with delayed diagnosis and treatment interruption, and were managed with bromocriptine, while one case was attributed to macroadenoma-related disease complexity. Patients with uninterrupted access to care—more likely to receive cabergoline—showed earlier hormonal normalization, menstrual recovery, and spontaneous pregnancy.

Conclusion: Insurance-related constraints are associated with differences in treatment selection, delays, and interruptions, which may contribute to poorer clinical outcomes despite biochemical response. Improving access to optimal therapy may enhance real-world reproductive outcomes in prolactinoma.

Keywords: Prolactinoma; Amenorrhea; Insurance Coverage; Treatment Adherence; Bromocriptine; Cabergoline

The Effect of Paternal Involvement in Antenatal Care and Adherence to Iron Supplementation on the Incidence of Anemia among Pregnant Women in Pelalawan Regency, Riau Province

Ninda Frymonalitz¹, Noviardi², Dhini Aiyulie Novri², Nastiti Hemas Mayangsari¹

¹Obstetrics and Gynecology Residency Program, Universitas Riau

²Department of Obstetrics and Gynecology, Universitas Riau

ABSTRACT

Background: Anemia in pregnancy remains a significant public health problem in Indonesia and contributes to increased maternal and perinatal morbidity and mortality. Adherence to iron-folic acid supplementation (iron tablets) is a key strategy in preventing anemia; however, compliance is often suboptimal. Paternal involvement in antenatal care (ANC) is believed to influence maternal health behaviors, including adherence to iron supplementation. This study conducted to determine the effect of paternal involvement in antenatal care and adherence to iron tablet consumption on the incidence of anemia among pregnant women in Pelalawan Regency.

Methods: This study employed an analytical observational design with a cross-sectional approach conducted in Pelalawan Regency. The study population included pregnant women in the second and third trimesters who met the inclusion criteria. Data were collected using structured questionnaires to assess paternal involvement and adherence to iron tablet consumption, along with hemoglobin measurements to determine anemia status. Data analysis was performed using bivariate and multivariate statistical tests to evaluate associations and determine the most influential factors.

Results: The results showed a significant association between paternal involvement in antenatal care and the incidence of anemia among pregnant women ($p < 0.05$). Adherence to iron tablet consumption was also significantly associated with anemia ($p < 0.05$). Multivariate analysis indicated that adherence to iron supplementation was the most dominant factor affecting anemia incidence, while paternal involvement acted as a supportive factor that improved adherence.

Conclusion: Paternal involvement in antenatal care and adherence to iron tablet consumption significantly influence the incidence of anemia in pregnant women. Strengthening male involvement in antenatal services and enhancing education on the importance of regular iron supplementation are recommended to reduce the prevalence of anemia in pregnancy.

Keywords: anemia, pregnancy, antenatal care, paternal involvement, iron supplementation

Postpartum Intrauterine Device Placement in an Unmarried Adolescent Mother: Clinical Justification and Legal Considerations in Indonesia

Hilda Herman, Muhammad Syarif

Obstetrics and Gynecology Department of Pasar Rebo Hospital, Jakarta, Indonesia

Corresponding Author: Hilda Herman, E-Mail: hildaherman.dr@gmail.com

ABSTRACT

Introduction: Adolescent pregnancies are a global public health concern due to its association with increased maternal and neonatal morbidity and mortality. The risks are particularly pronounced in very young adolescents, whose physical, psychological, and social readiness for pregnancy is often inadequate. Postpartum contraception is a critical strategy to prevent rapid repeat pregnancies, which are known to further elevate maternal risks.

Case Illustration: A 15-year-old unmarried female presented with her first pregnancy and subsequently delivered a live infant. Due to her young age and high risk of repeat pregnancy, postpartum contraceptive counseling was conducted. After comprehensive explanation with the patient and her parents, informed consent was obtained from the parents, and a postpartum IUD was inserted to prevent a second pregnancy. The procedure was performed without complications, and the patient was scheduled for regular follow up and psychosocial support.

Discussion: Adolescent mothers (aged 10–19 years) face higher risks of eclampsia, puerperal endometritis, systemic infections and maternal mortality than women aged 20–24 years, and babies of adolescent mothers face higher risks of low birth weight, preterm birth and severe neonatal condition. Recurrent pregnancies with short interpregnancy intervals may further increase these risks. In Indonesia, reproductive health services for adolescents are regulated under Government Regulation No. 28 of 2024, which implements the Health Law No. 17 of 2023. These regulations include access to contraception as part of adolescent reproductive health services.

Conclusions: Postpartum IUD insertion in adolescent mother represents a clinically appropriate and ethically acceptable strategy to prevent subsequent high-risk pregnancies. When performed with parental consent and focus on maternal health protection, this approach is legally relevant in Indonesia. Clear clinical documentation and careful legal interpretation are essential to ensure patient safety and protect healthcare provider.

Keywords: adolescent pregnancy; contraception; legal aspects.

**Maternal Critical Asthma pada Kehamilan 26 Minggu dengan Fatalitas: Tantangan Integrasi
Layanan Kesehatan Reproduksi dan Pengelolaan Penyakit Kronis
sebagai Upaya Penurunan AKI-AKB**

Khoirul Nadya Aprilia Sagala¹

¹Fakultas Kedokteran, Universitas Syiah Kuala, Aceh, Indonesia

ABSTRACT

Latar Belakang: Asma merupakan salah satu penyakit tidak menular yang sering memperberat kehamilan dan berkontribusi terhadap peningkatan Angka Kematian Ibu (AKI) dan Angka Kematian Bayi (AKB). Ketidaksielarasan antara layanan kesehatan reproduksi dan pengelolaan penyakit kronis masih menjadi isu penting dalam sistem kesehatan Indonesia. Pelaporan kasus ini bertujuan menyoroti tantangan integrasi tersebut melalui gambaran gagal napas maternal akibat eksaserbasi asma berat yang tidak terkontrol.

Kasus: Seorang perempuan 27 tahun, G3P2A0 dengan usia kehamilan 26 minggu, datang ke IGD dengan keluhan sesak progresif, batuk, dan wheezing selama satu bulan, diperberat infeksi saluran napas atas. Pasien memiliki riwayat asma tidak terkontrol dan hanya menggunakan salbutamol inhalasi tanpa terapi pengendali atau pemantauan spesialis. Tanda vital menunjukkan distress napas berat (RR 40/menit, HR 130/menit, SpO₂ 91–92%). Dilakukan pemberian oksigen, nebulisasi salbutamol–ipratropium, kombinasi salbutamol–budesonide, serta kortikosteroid intravena. Namun terjadi penurunan kesadaran dan kelelahan napas, sehingga dilakukan intubasi. Pasien mengalami henti napas dan henti jantung. Denyut jantung janin menunjukkan bradikardi berat. Resusitasi lanjut tidak berhasil dan ibu serta janin dinyatakan meninggal.

Pembahasan: Kasus ini menggambarkan konsekuensi fatal dari asma tidak terkontrol pada kehamilan dan menggarisbawahi perlunya penguatan integrasi layanan reproduksi dengan manajemen penyakit kronis. Kurangnya terapi pengendali, minimnya edukasi komunitas, serta keterlambatan rujukan menjadi faktor risiko penting. Intervensi berbasis kearifan lokal melalui kader kesehatan, edukasi lingkungan, dan identifikasi pencetus sesuai budaya, dapat meningkatkan kepatuhan terapi, deteksi dini eksaserbasi, dan pemanfaatan rujukan.

Kesimpulan: Integrasi layanan kesehatan reproduksi, sistem rujukan yang kuat, dan edukasi berbasis komunitas diperlukan untuk menurunkan AKI–AKB dan menghadapi tantangan double burden penyakit tidak menular pada kehamilan.

Keywords: Asma, Kehamilan, Penyakit Kronis, AKI-AKB

Inequalities in Maternal Health Service Access and Maternal Mortality in Indonesia

Shalma Alaika Aurel Balgis¹, Nasheeha Wening Reza¹

¹Post Graduated Medical Doctor, Faculty of Medicine, Universitas Padjadjaran – RSUP Dr. Hasan Sadikin, Bandung, Indonesia

ABSTRACT

Background: Maternal mortality remains a major health equity challenge in Indonesia. Although national indicators show gradual improvement, disparities in access to quality maternal health services persist across geographic regions, socioeconomic groups, and health system capacities. Reports from the World Health Organization and national surveillance data from the Kementerian Kesehatan Republik Indonesia indicate that many maternal deaths are preventable and closely linked to inequitable access to timely and adequate obstetric care.

Methods: A systematic review was conducted following PRISMA guidelines. A comprehensive search of PubMed, Scopus, Web of Science, and Google Scholar identified peer-reviewed observational studies and nationally representative analyses examining disparities in antenatal care (ANC), skilled birth attendance, emergency obstetric care (EmOC), referral systems, and postnatal services in Indonesia. Study selection and data extraction were performed independently using predefined eligibility criteria. Methodological quality was assessed with standardized risk of bias tools to ensure robustness. Due to heterogeneity in design and outcome reporting, findings were synthesized narratively with emphasis on strength and consistency of associations.

Results: Substantial inequalities were observed between urban and rural areas, western and eastern provinces, and across wealth and education gradients. Women in remote regions, from lower socioeconomic backgrounds, and with limited education were significantly less likely to receive adequate ANC, skilled birth attendance, and timely comprehensive EmOC. Geographic barriers, referral delays, and uneven distribution of health facilities were consistently associated with higher maternal mortality. Health insurance coverage and maternal education emerged as protective determinants.

Conclusion: Persistent inequities in maternal health service access remain a key structural driver of maternal mortality in Indonesia, underscoring the need for equity focused health system strengthening and targeted policy interventions.

Keyword: maternal mortality, health inequity, maternal health services, obstetric care access

Angiogenic and Placental Biomarkers for Early Detection of IUGR: A Comprehensive Systematic Review

Nasheeha Wening Reza¹, Ayrton Fajar Muhamad²

¹Post Graduated Medical Doctor, Faculty of Medicine, Universitas Padjadjaran – RSUP Dr. Hasan Sadikin, Bandung, Indonesia

²Departement of Obstetric and Gynecology, Faculty of Medicine, Universitas Padjadjaran – RSUP Dr. Hasan Sadikin, Bandung, Indonesia

ABSTRACT

Background: Fetal growth restriction (IUGR) is a major contributor to perinatal morbidity and mortality worldwide, affecting approximately 10–15% of pregnancies. In Indonesia, the prevalence remains high, particularly in underserved areas where delayed diagnosis and limited resources hinder optimal management. Early detection is essential to reduce the risks of stillbirth, preterm birth, and neonatal complications.

Methods: This systematic review was conducted in accordance with PRISMA guidelines. Studies published between 2020 and 2025 were identified from PubMed, Embase, and other reputable medical databases. Eligible studies evaluated the diagnostic performance of soluble fms-like tyrosine kinase-1 (sFlt-1), placental growth factor (PlGF), and soluble neuropilin-1 (sNRP-1) in predicting IUGR.

Results: Of the screened articles, studies that met the inclusion criteria were included in the final analysis. Soluble neuropilin-1 (sNRP-1) demonstrated a strong association with early-onset IUGR, while sFlt-1 and PlGF were more effective in detecting late-onset IUGR. The combination of these biomarkers with ultrasound improved diagnostic accuracy by up to 30%, facilitating earlier intervention and improved clinical management. However, implementation in resource-limited settings remains challenging due to high testing costs, limited availability of specialized equipment, and the absence of standardized protocols.

Conclusion: Angiogenic and placental biomarkers show promising potential for early IUGR detection and may enhance prenatal screening strategies. Although cost and accessibility remain significant barriers, further research and the development of cost-effective implementation strategies are needed to support their integration into routine clinical practice, particularly in resource-limited settings such as Indonesia.

Keyword: Fetal Growth Restriction, Angiogenic Biomarkers, Placental Dysfunction, Early Detection

Analysis of Profile, Knowledge, Attitude, and Behavior of Patients Toward Delayed Detection of Cervical Cancer at RSUD Arifin Achmad Pekanbaru in 2025

Ninda Frymonalitza¹, Noviardi², Dhini Aiyulie Novri², Vani Ardiani¹

¹Obstetrics and Gynecology Residency Program, Universitas Riau

²Department of Obstetrics and Gynecology, Universitas Riau

ABSTRACT

Background: Cervical cancer remains a major global health problem, particularly in developing countries, where most cases are diagnosed at advanced stages due to delayed detection. In Indonesia, the high mortality rate reflects inadequate early screening uptake. Delays in diagnosis are multifactorial, involving sociodemographic factors, as well as patients' knowledge, attitudes, and health-seeking behaviors. Understanding these factors is essential to improve early detection strategies and reduce disease burden.

Methods: This study is an analytical observational study conducted at RSUD Arifin Achmad Pekanbaru in 2025. The study included cervical cancer patients who met inclusion criteria. Data were collected using structured questionnaires to assess sociodemographic characteristics, knowledge, attitudes, and behaviors related to early detection of cervical cancer. Statistical analysis was performed to evaluate the relationship between these variables and delayed diagnosis, including multivariate logistic regression to identify dominant factors.

Results: The majority of patients presented with delayed detection of cervical cancer. A considerable proportion of patients demonstrated low levels of knowledge regarding early detection methods, negative attitudes toward screening, and poor health-seeking behavior. Sociodemographic factors such as lower education level and income were significantly associated with delayed diagnosis. Multivariate analysis revealed that knowledge and behavior were key determinants, with low educational status emerging as the most dominant contributing factor.

Conclusion: Delayed detection of cervical cancer is strongly associated with inadequate knowledge, unfavorable attitudes, and poor health-seeking behavior, influenced by sociodemographic factors. Strengthening health education, improving awareness, and increasing accessibility to screening programs are crucial to promote early detection and reduce cervical cancer morbidity and mortality.

Keywords: cervical cancer, delayed detection, knowledge, attitude, behavior, screening

Dari Medan Konflik ke Kesehatan Ibu dan Anak: Telaah Sistematis Dampak Peperangan pada Luaran Maternal dan Neonatal

Arya Ivan Mahendra^{1,2}, Yudianto Budi Saroyo², Delvanny Alfikri Rekaputri Wicaksono¹, Dawa Fauz Susanto^{2,3}, Rani Laurencia Permatasari¹

¹Fakultas Kedokteran Universitas Airlangga, Surabaya, Indonesia

²Departemen Obstetri Ginekologi, RSUPN Cipto Mangunkusumo, Fakultas Kedokteran Universitas Indonesia, Jakarta, Indonesia

³Fakultas Kedokteran Universitas Pembangunan Nasional Veteran Jakarta, Jakarta, Indonesia

ABSTRAK

Latar Belakang: Peperangan dan konflik bersenjata merupakan kondisi sosial kesehatan yang dapat memperburuk keselamatan ibu dan bayi baru lahir. Kerusakan fasilitas kesehatan, terganggunya sistem rujukan, kelangkaan obat esensial, perpindahan penduduk, serta keterlambatan memperoleh pertolongan obstetri dan neonatal berpotensi meningkatkan morbiditas dan mortalitas maternal-neonatal. Dalam konteks negara berpendapatan rendah dan menengah, dampak konflik sering kali diperberat oleh lemahnya kapasitas sistem kesehatan, terbatasnya tenaga kesehatan, dan menurunnya kesinambungan pelayanan selama kehamilan, persalinan, dan masa nifas.

Metode: Telaah sistematis ini disusun mengikuti pedoman PRISMA. Pencarian literatur dilakukan secara komprehensif pada PubMed, Scopus, dan ScienceDirect. Strategi pencarian mengombinasikan istilah terkait konflik bersenjata, perang, daerah konflik, krisis kemanusiaan, kehamilan, luaran maternal, luaran neonatal, persalinan preterm, stillbirth, kematian neonatal, dan kematian perinatal.

Hasil Diskusi: Sebanyak 2.437 studi telah diidentifikasi dan dilanjutkan tahap skrining serta ekstraksi. Salah satu studi dari Tigray, Ethiopia menunjukkan rujukan dari wilayah rural menurun tajam, komplikasi obstetri berat meningkat, rasio komplikasi kehamilan bertambah, dan persalinan preterm pada kelompok komplikasi obstetri juga meningkat. Selain itu, penggunaan intervensi esensial seperti oksitosin untuk pencegahan perdarahan postpartum dan magnesium sulfat untuk eklampsia menurun selama konflik. Secara umum, pola ini menunjukkan bahwa konflik memperbesar risiko keterlambatan penanganan, memperberat keparahan kasus saat datang ke fasilitas kesehatan, dan memperburuk prognosis ibu serta neonatus.

Kesimpulan: Peperangan dan paparan wilayah berkonflik berpotensi meningkatkan risiko luaran maternal dan neonatal yang merugikan. Temuan ini menegaskan pentingnya perlindungan layanan kesehatan ibu dan bayi, penguatan sistem rujukan, ketersediaan obat-obatan esensial, serta strategi intervensi berbasis komunitas pada situasi konflik dan pascakonflik.

Kata Kunci: peperangan, luaran maternal, luaran neonatal, kehamilan

Maternal Mortality Reduction: Integrating Social Obstetrics and Local Maritime Systems in Kepulauan Anambas Archipelago, Indonesia (2010–2025)

Deby Noviasari¹, Noviard², dr. Dhini Aiyulie Novri², Ilham Harahap²

¹PPDS Obstetri dan Ginekologi, Fakultas Kedokteran Universitas Riau

²Departemen Obstetri dan Ginekologi, Fakultas Kedokteran Universitas Riau

ABSTRACT

Background: Maternal mortality in remote archipelagic regions remains a critical barrier to achieving Sustainable Development Goals in Indonesia. Geographic isolation, limited healthcare access, and socio-cultural practices contribute to persistent delays in seeking, reaching, and receiving care. Using a social obstetrics perspective, this study analyzed distal and intermediate determinants of maternal mortality in Kepulauan Anambas and identified context-specific strategies integrating local maritime resources.

Methods: This retrospective observational study analyzed secondary data from the District Health Office and three district hospitals, covering all 28 maternal deaths recorded from 2010 to October 2025. Determinants were classified using the McCarthy and Maine framework. Descriptive statistics profiled causes and characteristics, while logistic regression assessed associations between distal determinants (education, occupation, income) and intermediate determinants (nutritional status, age, parity, marital status, distance to facilities, antenatal care) with maternal mortality.

Results: Maternal mortality remained above national targets for most of the 2010–2025 period, mainly driven by low socioeconomic status. Limited antenatal care coverage and prolonged distance to facilities were the strongest intermediate factors ($p=0.005$). Geographic barriers and inter-island transportation significantly contributed to the three-delays model. However, a sharp decline occurred, reaching zero cases in 2023–2025 after implementing social obstetrics strategies including obstetrician deployment, portable ultrasound, and the innovative Kapal Perujuk referral boat.

Conclusion: Social obstetrics interventions incorporating local maritime infrastructure (Kapal Perujuk) and culturally adapted education have successfully reduced maternal mortality in Kepulauan Anambas. Strengthening community-based referral systems while addressing harmful local practices offers a replicable model for lowering MMR and the double burden in similar remote Indonesian regions.

Keywords: maternal mortality, social obstetrics, maritime health, three-delays model, archipelago Indonesia

Psychosocial Dilemmas and Diagnostic Challenges of Primary Amenorrhea in Adult Patients: A Case Report

Dian Permatajaya Rimi^{1,8}, Wahyuni Saddang^{2,5}, Abadi Aman^{3,6}, Nathalia V. Mappewali^{4,5}, Muskamal Tabate^{4,7}, Fadli Ananda^{4,5}

¹Study Programme of Obstetrics and Gynaecology, Faculty of Medicine, Universitas Muslim Indonesia, Indonesia

²Department of Obstetrics and Gynaecology/Fertility and Reproductive Endocrinology, Faculty of Medicine, Universitas Muslim Indonesia, Indonesia

³Department of Obstetrics and Gynaecology/Social Obstetrics and Gynaecology, Faculty of Medicine, Universitas Muslim Indonesia, Indonesia

⁴Department of Obstetrics and Gynaecology, Faculty of Medicine, Universitas Muslim Indonesia, Indonesia

⁵Ananda Mother and Child Hospital, Makassar, Indonesia

⁶Bhayangkara Hospital, Makassar, Indonesia

⁷Tenriawaru Hospital, Bone Regency, Indonesia

⁸Ibnu Sina Hospital, Makassar, Indonesia

Corresponding Author: wahyunisaddang.fk@umi.ac.id

ABSTRACT

Background: Primary amenorrhea is defined as the absence of menarche by the age of 15 years in individuals with normal secondary sexual characteristics, or by the age of 13 years in those without secondary sexual development. While most cases are identified during adolescence, delayed presentation in adulthood is rare and presents complex diagnostic and psychosocial challenges.

Case Presentation: A 30-year-old woman presented with a lifelong history of never having menstruated. Physical examination revealed normal secondary sexual characteristics (Tanner stage V). Laboratory evaluation demonstrated a markedly elevated serum prolactin level (1,847.8 ng/mL), low estradiol (8.1 pg/mL), and low-normal follicle-stimulating hormone (FSH) levels (1.6 mIU/mL). Brain magnetic resonance imaging revealed an intrasellar mass measuring approximately 22 mm, consistent with a pituitary macroadenoma. The patient was diagnosed with primary amenorrhea due to severe hyperprolactinemia secondary to a prolactinoma. The delayed diagnosis appeared to be associated with postponed medical consultation since adolescence.

Discussion: Hyperprolactinemia suppresses gonadotropin-releasing hormone (GnRH) secretion through inhibition of hypothalamic KNDy neurons (kisspeptin, neurokinin B, and dynorphin), resulting in hypogonadotropic hypogonadism and chronic hypoestrogenism. Beyond endocrine dysfunction, this case highlights significant social determinants of health, including limited reproductive health education, passive parental involvement, and sociocultural pressures related to fertility, all of which contributed to delayed diagnosis and increased psychosocial burden.

Conclusion: While most cases are diagnosed during adolescence, delayed presentation in adulthood is rare and poses complex diagnostic and psychosocial challenges that may result from an undetected prolactinoma. This case underscores the importance of early recognition of menstrual disorders during adolescence, family and community education, and a multidisciplinary management approach that integrates medical, social, and psychological perspectives.

Keywords: Primary amenorrhea; hyperprolactinemia; prolactinoma; social determinants of health; adolescent reproductive health.

Digital Risk Surveillance in Maternal Care to Accelerate Sustainable Development Goal 3 Targets: A Scoping Review

Yova Agustini¹, Susaldi¹, Diah Wulandari², Meita Dhamayanti³, Fanni Hanifah⁴, Hardinsyah⁵, Salma Widya Azhari⁶, Ova Emilia⁷

¹Doctoral Student, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

²Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

³Department of Pediatrics, Faculty of Medicine, Universitas Padjadjaran, Bandung, Indonesia

⁴Doctoral Student in Midwifery, Faculty of Medicine, Universitas Padjadjaran, Bandung, Indonesia

⁵Department of Community Nutrition, IPB University, Bogor, Indonesia

⁶Doctoral Student in Nutrition, Faculty of Human Ecology, IPB University, Bogor, Indonesia

⁷Department of Obstetrics and Gynecology, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

ABSTRACT

Background: Reducing maternal morbidity and mortality remains a critical challenge in low- and middle-income countries, including Indonesia. Despite the rapid expansion of digital health technologies, the integration of digital risk surveillance systems for early detection and continuous monitoring of high-risk pregnancies remains fragmented and insufficiently synthesized.

Objective: This study aimed to identify key maternal health risk themes requiring surveillance and to map the characteristics and functionalities of digital health applications needed to support risk surveillance in pregnancy, in alignment with Sustainable Development Goal 3 (SDG 3).

Methods: A scoping review was conducted following the Joanna Briggs Institute methodology and reported in accordance with the PRISMA-ScR guidelines. The PEOS framework was applied to guide the search strategy across multiple databases. Relevant studies were screened through a systematic selection process, including duplicate removal and eligibility assessment based on predefined inclusion criteria.

Results: A total of 1,534 records were identified, with 198 duplicates removed. Following title and abstract screening, 1,336 articles were assessed, resulting in 46 eligible full-text articles. Finally, 8 studies met the inclusion criteria. The findings revealed three major domains: (1) maternal health risk factors, including clinical, behavioral, and socio-environmental determinants; (2) digital health functionalities, such as remote clinical monitoring, real-time risk tracking, and decision-support systems; and (3) implementation barriers, including limited digital literacy, infrastructure constraints, and data integration challenges. Notably, effective digital surveillance systems require the integration of multi-functional applications rather than standalone tools.

Conclusion: This review highlights that digital risk surveillance in maternal healthcare should move toward integrated, multi-component digital ecosystems capable of continuous monitoring and early detection of high-risk pregnancies. Strengthening interoperability, user-centered design, and health system integration is essential to maximize the impact of digital health innovations in accelerating the achievement of SDG 3.

Keywords: digital risk surveillance, maternal health, digital health technology, high-risk pregnancy, SDG 3

The Effectiveness of Educational Video Interventions on Knowledge and Attitudes Toward Premarital Sex among Female Students of Public Senior High Schools in Sukarami District, Palembang City

¹Risa Destia, ¹Obby Saleh, ²Hartati, ²Ferry Yusrizal, ²R. Ismail Hadyathma

¹Obstetric and Gynecology Resident, Faculty of Medicine, Sriwijaya University, Indonesia

²Obstetric and Gynecology Department, Faculty of Medicine, Sriwijaya University, Indonesia

ABSTRACT

Background: Premarital sex among adolescents is a critical public health issue with significant physical, mental, and social consequences, including the risk of sexually transmitted infections and unintended pregnancies. Limited knowledge and permissive attitudes toward premarital sex necessitate effective educational interventions. This study aimed to analyze the effectiveness of educational videos in improving knowledge and attitudes among female senior high school students in Sukarami District, Palembang City.

Methods: A pre-experimental design with a pre–post test approach without a control group was employed. The study involved 723 female students selected through multistage sampling based on inclusion criteria. Data were collected using a validated and reliable questionnaire administered before and after the intervention, which consisted of an educational video screening. Data analysis was performed using the Wilcoxon Signed-Rank Test.

Results and Discussion: The findings revealed a significant increase in mean knowledge scores from 54.5 (SD=5.393) to 58.43 (SD=5.176) with $p=0.000$ ($p<0.05$). Similarly, mean attitude scores increased from 43.47 (SD=4.961) to 44.62 (SD=4.508) with $p=0.000$ ($p<0.05$). These results indicate that educational video interventions are effective in enhancing knowledge and fostering healthier attitudes toward premarital sex among adolescents.

Conclusion: Educational audiovisual media serves as a practical, cost-effective health promotion strategy tailored to adolescent characteristics. Further research with experimental designs and more diverse populations is recommended to strengthen these findings and explore the long-term sustainability of attitude changes.

Keywords: Premarital Sex, Adolescents, Knowledge, Attitude, Educational Video

B. POSTER PRESENTATION

Lingkar Kepala Janin sebagai Prediktor Cephalopelvic Disproportion: Analisis Prospektif pada Kasus Persalinan Per Vaginam Spontan dan Seksio Sesarea di RSUD Dr. Adhyatma MPH Semarang

Muhamad Taufiqy Setyabudi¹, Cahya Okta Putra Basreka², Umniatuz Zahroh²

¹Staf Pengajar Departemen Obstetri Ginekologi Fakultas Kedokteran Universitas Muhammadiyah Semarang

²Mahasiswa Profesi Fakultas Kedokteran Universitas Muhammadiyah Semarang

Email: dr.taufiqy1@gmail.com

ABSTRAK

Latar Belakang Angka seksio sesarea (SC) di Indonesia terus meningkat dan telah melampaui ambang batas yang direkomendasikan WHO. Salah satu indikasi utama SC adalah cephalopelvic disproportion (CPD), yaitu ketidakcocokan antara ukuran kepala janin dan panggul ibu. Diagnosis CPD umumnya ditegakkan secara intrapartum setelah terjadi kegagalan progresi persalinan, sehingga upaya skrining antenatal masih menjadi tantangan. Lingkar kepala janin merupakan salah satu parameter biometri yang diduga berperan dalam terjadinya CPD, namun bukti lokal masih terbatas.

Tujuan: Untuk membandingkan lingkar kepala bayi baru lahir antara persalinan pervaginam spontan dan persalinan seksio sesarea akibat cephalopelvic disproportion.

Metode: Penelitian ini merupakan studi observasional analitik dengan desain case-control prospektif yang dilaksanakan di RSUD dr. Adhyatma MPH Semarang pada periode Juli–Desember 2025. Subjek penelitian adalah ibu dengan kehamilan aterm (≥ 37 minggu), kehamilan tunggal, presentasi kepala, dan bayi tanpa malformasi kongenital. Pengambilan sampel dilakukan secara consecutive sampling. Total sampel berjumlah 48 parturien, terdiri dari 23 persalinan seksio sesarea karena CPD dan 25 persalinan pervaginam spontan. Lingkar kepala bayi diukur segera setelah lahir menggunakan pita ukur non-elastis. Analisis data dilakukan menggunakan uji Mann–Whitney dengan batas kemaknaan statistik $p < 0,05$.

Hasil: Tidak terdapat perbedaan bermakna lingkar kepala bayi antara persalinan seksio sesarea akibat CPD dan persalinan pervaginam spontan. Temuan ini menunjukkan bahwa lingkar kepala bayi bukan prediktor tunggal terjadinya CPD dan menegaskan bahwa CPD merupakan kondisi multifaktorial. Penilaian risiko CPD memerlukan pendekatan komprehensif dengan mempertimbangkan faktor janin dan maternal lainnya, serta penelitian lanjutan dengan desain antenatal dan ukuran sampel lebih besar.

Kesimpulan: Penelitian ini menemukan bahwa tidak ada perbedaan bermakna lingkar kepala bayi antara persalinan seksio sesarea akibat cephalopelvic disproportion dan persalinan pervaginam spontan, sehingga lingkar kepala bayi tidak dapat dijadikan sebagai prediktor tunggal terjadinya CPD dan perlu dipertimbangkan bersama faktor janin serta maternal lainnya melalui pendekatan penilaian risiko yang multidimensional.

Kata Kunci: Lingkar kepala bayi, cephalopelvic disproportion, seksio sesarea, persalinan pervaginam, biometri janin

Gambaran Sosial Demografi dan Pengetahuan Ibu Hamil Usia Dini Mengenai Pemeriksaan Kehamilan Menggunakan Buku KIA

Juminten Saimin¹, Alexander Joshua Christianto², Nur Indah Purnamasari³
^{1,2,3}Bagian Obstetri dan Ginekologi, Fakultas Kedokteran, Universitas Halu Oleo

ABSTRAK

Latar Belakang: Angka kehamilan pada usia dini secara global masih tinggi. Ketidaksiapan mental, emosional, dan sosial dapat berdampak pada kesehatan ibu dan janin. Pengetahuan ibu hamil mengenai penggunaan Buku KIA berkaitan dengan kepatuhan pemeriksaan kehamilan sebagai upaya untuk menekan risiko komplikasi. Penelitian ini bertujuan untuk mengetahui gambaran sosial demografi dan pengetahuan ibu hamil mengenai penggunaan Buku KIA.

Metode: Penelitian dilakukan dengan metode cross sectional. Sebanyak 40 ibu hamil usia dini yang berdomisili di Kota Kendari, Sulawesi Tenggara mengikuti penelitian. Penentuan sampel penelitian berdasarkan kriteria inklusi dan eksklusi. Pengumpulan data menggunakan kuesioner. Analisis data menggunakan uji chi-square dengan nilai kemaknaan $p < 0,05$.

Hasil Diskusi: Hasil penelitian menunjukkan bahwa usia terbanyak 19 tahun (55%), 16 tahun (20%), dan 18 tahun (15%). Pendidikan terakhir adalah SMA (80%) dan SMP (20%). Semua responden sudah menikah (100%) dengan pekerjaan sebagai IRT (75%) dan pelajar (25%). Ibu hamil yang membawa buku KIA sebagian besar memiliki pengetahuan yang baik (75%), sedangkan yang tidak membawa buku memiliki pengetahuan kurang (60%). Ibu hamil dengan pengetahuan yang baik sebagian besar membawa buku KIA (65%), sedangkan yang berpengetahuan kurang sebagian besar tidak membawa buku (70,6%). Terdapat hubungan yang signifikan antara pengetahuan dan perilaku ($p = 0,025$).

Kesimpulan: Pengetahuan ibu hamil usia dini mempengaruhi perilaku menggunakan Buku KIA saat pemeriksaan kehamilan. Perlu upaya untuk meningkatkan pengetahuan dan perilaku positif mengenai pemeriksaan kehamilan pada ibu hamil usia dini.

Kata kunci: buku KIA, hamil usia dini, pemeriksaan kehamilan, pengetahuan, perilaku

When Warning Sign Esclate : Managing Partial Hellp Syndrome in an Impending Eclampsia Case

Ormy Abiga Mahendra¹, I Nyoman Tritia Widiantara²

¹ Panembahan Senopati Hospital Bantul, Yogyakarta, Indonesia

² Departement of Obstetrics and Gynecology, Panembahan Senopati Hospital Bantul, Yogyakarta, Indonesia

ABSTRACT

Background: Severe preeclampsia (PEB) is a major cause of maternal and neonatal morbidity and mortality in developing countries. HELLP syndrome, a serious complication of pregnancy-related hypertension, involves hemolysis, elevated liver enzymes, and low platelets, posing high risks for mother and fetus.

Case Presentation: A 22 year old multigravida at 28 weeks gestation presented with shortness of breath, headache, nausea, and blurred vision for 24 hours. She had a history of hypertension since 5 months of gestation and epilepsy on regular treatment. Vital signs showed BP 179/136 mmHg, HR 107 bpm, RR 24/min, and T 36.7°C. Physical examination revealed mild right upper quadrant tenderness without edema or peritonitis. Laboratory findings indicated partial HELLP syndrome: AST 69 U/L, ALT 54 U/L, platelets 108,000/ μ L, urea 80 mg/dL, creatinine 3.87 mg/dL, LDH 485 U/L, and significant proteinuria (+++). The patient received magnesium sulfate for seizure prophylaxis and intravenous nitroglycerin for blood pressure control. Continuous maternal and fetal monitoring was performed. Cesarean delivery was undertaken due to an unfavorable cervix and non-reassuring fetal heart rate. A preterm but viable neonate was delivered and admitted to the NICU. Postoperatively, the patient's condition improved with normalization of liver enzymes and platelet count within 72 hours. No eclamptic seizures occurred, and she was discharged on postpartum day seven in stable condition.

Discussion: Partial HELLP syndrome is a severe form of pregnancy-related hypertension. It arises from endothelial dysfunction and microangiopathy, increasing risks of preterm birth and fetal death. Management includes maternal stabilization, seizure prevention, blood pressure control, timely delivery, and supportive care, with intensive monitoring to prevent progression and adverse outcomes.

Conclusion: Early recognition, close monitoring, and timely delivery are essential to reduce maternal and neonatal morbidity and mortality in partial HELLP syndrome.

Keywords: Partial HELLP Syndrome, preeclampsia, pregnancy, hypertension

4 Downstream Factors Contributing to the Government's Failure to Reduce Maternal Mortality Rates in Type C Hospital

Sardjana Nitidiningrat, Gulam Gumilar, Nuzma Anbia
Department of Obstetrics and Gynecology, Syarif Hidayatullah State Islamic University, Jakarta

ABSTRACT

Objective: The primary objective is to assess the government's failure to reduce maternal mortality rates in Type C Hospitals and to assist in implementing necessary corrective measures at various stages. This requires strengthening the ongoing monitoring system.

Materials and Methods: Data will be verified using sources such as Operational Research Systems Analysis (ORSA) with structural word development and relaxation, and conducted in government-owned type C hospitals in Indonesia. The main variables observed are a) direct democracy b) representative government c) bureaucratic supply d) decentralization. Four dominant factors for accuracy in reducing maternal mortality, interventions with their respective indicators have been identified and prioritized.

Results: There are 4 downstream factors that can be considered as the main drivers in reducing maternal mortality in type C Hospitals in Indonesia, as well as several specific potential measures directly aimed at reducing maternal mortality that can be adopted in the health sector. The contribution of these factors is: a) direct democracy 26.5%: Voting paradox (ambiguous meaning of mandate), Preference intensity and incorporation (minorities bear the costs of inefficient social choices); b) representative government 32.7%: Influence of organized interests (seeking retribution), Geographical electoral districts (allocation of public funds), Term limitations caused by election cycles (underinvestment), Attitudes to attract public attention (restrictive agenda); c) bureaucratic supply 17.5%: Agency problems (resource diversion), Difficulty assessing output (efficiency X), Limited competition (efficiency X), Protection of civil servants (inflexibility), Bureaucratic failure as market failure (allocative efficiency and X). d) Decentralization 23.3%: Distributed authority (implementation issues), Fiscal externalities (unequal distribution of local public goods) in the Clinical Management model to reduce maternal mortality in government-owned type C hospitals.

Conclusion: The rate of maternal mortality reduction in Type C Hospitals could decrease by 17.5% to 32.7% by the end of 2019.

Keywords: downstreaming factors, direct democracy, hilirisasi government, bureaucratic supply, decentralization, and clinical management model.

Intracranial Hemorrhage in HELLP Syndrome Complicating Twin Pregnancy: A Case Report

dr. Utami Rizalvi¹, dr. Cika Hanandiyah², dr. Akbar Rahmat, Sp. OG³

¹General Practitioner, Asyisyifaa Hospital, Bogor, West Jawa, Indonesia

²General Practitioner, Rina Medika Clinic, Bekasi, West Jawa, Indonesia

³Obstetric and Gynecology Departemen, Asyisyifaa Hospital, Bogor, West Jawa, Indonesia

ABSTRACT

Introduction: HELLP syndrome (Hemolysis, Elevated Liver enzymes, and Low Platelet count) is a severe obstetric complication associated with significant maternal and perinatal morbidity and mortality. Intracranial hemorrhage is a rare but life-threatening neurological complication related to hypertensive disorders of pregnancy.

Case: A 37-year-old multigravida at 36 weeks of gestation with poorly controlled gestational hypertension presented with severe headache, blurred vision, nausea, and vomiting. Blood pressure was 210/120 mmHg with proteinuria and thrombocytopenia (87,000/ μ L), consistent with impending eclampsia and suspected HELLP syndrome in a twin pregnancy complicated by fetal distress. Emergency cesarean section was performed, resulting in the delivery of two live neonates. Postoperatively, the patient developed decreased consciousness and generalized edema. Laboratory findings showed leukocytosis, elevated liver enzymes, hypoalbuminemia, and renal impairment. Non-contrast head CT revealed right cerebellar intracerebral hemorrhage with perifocal edema, subarachnoid hemorrhage, and obstructive hydrocephalus. The patient received antihypertensives, magnesium sulfate, diuretics, osmotherapy, antifibrinolytic therapy, and was referred for neurosurgical management.

Discussion: HELLP syndrome involves endothelial dysfunction, microangiopathy, platelet activation, and impaired cerebral autoregulation. Severe hypertension and coagulopathy increase the risk of cerebral hyperperfusion, edema, and hemorrhage. Intracranial hemorrhage may occur even without underlying vascular malformations and carries high morbidity and mortality.

Conclusion: Intracranial hemorrhage is a rare but fatal complication of HELLP syndrome. Early recognition, prompt blood pressure control, timely delivery, and multidisciplinary management are essential to optimize maternal and neonatal outcomes.

Keywords: HELLP syndrome; intracranial hemorrhage; preeclampsia; twin pregnancy; cerebellar hemorrhage

From Gut to Placenta, Probiotics for Preeclampsia Prevention: A Comprehensive Meta-Analysis Supporting Maternal and Perinatal Mortality Reduction

Amandus Michael Martin^{1,2,3}, Mohammad Haekal¹, Agus Supriyadi¹, Sudirmanto¹, Hadi Sjarbaini¹, Gde Suardana¹, Aidrus Abdul Muthalib¹, Muhammad Dwi Priangga¹

¹Department of Obstetrics and Gynecology, National Women and Children Health Center Harapan Kita, Jakarta, Indonesia

²Medical Doctor, Faculty of Medicine, Universitas Brawijaya, Malang, Indonesia

³Master of Biomedical Science, Faculty of Medicine, Universitas Brawijaya, Malang, Indonesia

ABSTRACT

Introduction: Preeclampsia is the second leading cause of maternal and perinatal morbidity and mortality worldwide, including in Indonesia. Current preventive strategies show less effective results. In pregnancy, dysbiosis disrupts intestinal barriers and causes bacterial translocation that triggers persistent systemic inflammation and blood pressure elevation leading to preeclampsia. It is known that probiotics maintain eubiosis, enhance mucosal immunity and intestinal barrier function, also act as immunomodulator. As an accessible and scalable biological intervention, probiotics may represent an integrative approach within reproductive health services to reduce maternal and perinatal mortality.

Objective: This systematic review and meta-analysis aims to analyze the effectiveness and safety of probiotics as preventive agent for preeclampsia, also to explore underlying mechanistic pathways. (Methods) Journal search was conducted using electronic primary databases "PubMed", "Cochrane Library", "ScienceDirect", and "Springer" with 2011-2025 publication range and was selected based on inclusion criteria. This meta-analysis is reported according to PRISMA guideline. Bias assessment was analyzed using ROBINS-I and Cochrane's RoB-2 tool. Review Manager 5.4 was utilized for statistical analysis, incorporating random-effects models to address clinical heterogeneity.

Results and Discussion: Among 154 screened articles, nine valid cohort and clinical trial studies were included. This meta-analysis demonstrated that probiotics consumption significantly reduced the incidence of preeclampsia (OR: 0.85; 95% CI: 0.76–0.95; p=0.006; I²=5%) among a total of 70,449 nulliparous women. Associated mechanisms included increasing short chain fatty acid production, exerting anti-inflammatory and anti-oxidative effect. Moreover, probiotics significantly increased insulin sensitivity, reduced fasting blood glucose, premature birth risk, and severe preeclampsia (p<0.05). No significant adverse effects were reported in all studies.

Conclusion: Probiotics appear to be effective and safe as preventive agent for preeclampsia. Probiotics may serve as an accessible and scalable preventive strategy that can be integrated into maternal health programs, particularly in resource-limited settings, supporting national efforts to reduce maternal and perinatal mortality.

Keywords: Incidence, Mechanism, Preeclampsia, Prevention, Probiotics

Embolisasi Arteri Uterina Bilateral pada Perdarahan Postpartum Lanjut Pasca Seksio Sesarea: Integrasi Intervensi Uterus-Sparing dalam Sistem Rujukan Berjenjang untuk Penurunan AKI

Egyd Tradiga¹, Hartati², Kemas Muhammad Dahlan³

¹Residen Obstetri dan Ginekologi, Fakultas Kedokteran, Universitas Sriwijaya, Indonesia

²Departemen Obstetri dan Ginekologi, Fakultas Kedokteran, Universitas Sriwijaya, Indonesia

³Departemen Bedah, Fakultas Kedokteran, Universitas Sriwijaya, Indonesia

*Korespondensi: Egyd Tradiga (email: egydtradiga@gmail.com ; HP/WA: 082240404716)

ABSTRAK

Latar Belakang: Perdarahan postpartum (PPH) lanjut dapat menyerupai perdarahan nifas fisiologis sehingga berisiko terlewatkan dan menimbulkan morbiditas maternal berat yang seharusnya dapat dicegah. Koordinasi rujukan yang belum optimal memperbesar risiko anemia berat dan transfusi berulang. Percepatan penurunan Angka Kematian Ibu (AKI) memerlukan integrasi deteksi berbasis risiko di tingkat komunitas dengan intervensi definitif yang efektif dan mempertahankan fungsi reproduksi.

Kasus: Seorang wanita 30 tahun, P2A0, 44 hari pasca seksio sesarea karena partus kasep, mengalami perdarahan pervaginam berulang sejak minggu pertama nifas. Awalnya dinilai sebagai perdarahan nifas fisiologis, kondisi berlanjut hingga terjadi anemia berat (Hb 5,8 g/dL) yang memerlukan transfusi berulang dan kuretase. Karena perdarahan persisten, pasien dirujuk ke rumah sakit tersier. CT angiografi mengidentifikasi cedera arteri uterina intramural bilateral sebagai sumber perdarahan. Embolisasi arteri uterina bilateral berhasil menghentikan perdarahan secara segera, menstabilkan kondisi hemodinamik, dan mempertahankan fertilitas tanpa komplikasi.

Pembahasan: Kasus ini menekankan pentingnya kewaspadaan terhadap etiologi vaskular pada PPH lanjut, khususnya pasca tindakan obstetri operatif. Embolisasi arteri uterina bilateral merupakan intervensi minimal invasif, uterus-sparing, dan efektif sebagai alternatif histerektomi emergensi. Penguatan skrining nifas berbasis risiko di layanan primer serta rujukan tepat waktu memungkinkan integrasi teknologi ini dalam sistem pelayanan maternal berjenjang.

Kesimpulan: Embolisasi arteri uterina bilateral memberikan kontrol perdarahan definitif sekaligus preservasi fertilitas. Integrasi deteksi dini di komunitas dan intervensi minimal invasif di tingkat tersier merupakan strategi replikatif dalam menekan morbiditas maternal berat dan mendukung percepatan penurunan AKI.

Kata kunci: perdarahan postpartum lanjut, embolisasi arteri uterina bilateral, intervensi uterus-sparing, sistem rujukan berjenjang, AKI

Atypical Location of Uterine Rupture During the Latent Phase of Oxytocin-Induced Labor

¹I Made Adhi Setia Wijaya, ²Adhyanovic Hadi Pradipta

¹General Practitioner of emergency department

Obstetric and Gynecology Department

RSIA Puri Adhya Paramita, Lampung Tengah, Lampung, Indonesia

ABSTRACT

Background: Uterine rupture is a condition where the uterine wall tears, either partially (incomplete rupture) or through the entire layer to the peritoneal cavity (complete rupture). Uterine rupture is a rare obstetric complication but is an emergency and potentially life-threatening for the mother and fetus. The incidence of uterine rupture is higher in women with uterine surgical scars compared to those without a history of surgery. Of the 38 cases (92.7%) were uterine ruptures with a history of surgical scars and 3 (7.3%) without surgical scars.

Case Report: In this report, a 40-year-old woman with G4P3A0 was referred by a private midwife to our emergency department due to pain and cramps in the lower abdomen accompanied by the finding of blood mucus in the birth canal since 1 day ago with a dilation of 3-4 cm, but there was no progress. Anamnesis, physical examination and supporting procedures were performed on the patient and then labor was induced with 5 units of Oxytocin. Five hours after induction, the progress of labor was still the same, the patient complained of abdominal pain like being cut, Bundle Rings on the abdomen, Cardiotocography (CTG) Sinusoid. Oxygenation was given at 3lpm, dextrose rehydration and the patient was immediately performed Section Casearia Cito. Uterine Rupture was found in the lateral corpus region.

Discussion Uterine rupture is a rare but life-threatening obstetric complication associated with high maternal and perinatal morbidity. Prior uterine scar, particularly from cesarean delivery, is the most significant risk factor, while multigravidity, advanced maternal age, teenage pregnancy, low socioeconomic status, unsupervised labor, and inappropriate uterotonic use also contribute. Ruptures most commonly occur in the anterior lower segment, with prevalence reported between 59% and 80% in women with previous cesarean sections. The present case, however, involved rupture of the lateral corpus, highlighting that atypical locations can occur, especially in multiparous women. Repeated pregnancies may weaken the myometrium, and excessive uterotonic exposure can increase intrauterine pressure, impair perfusion, and precipitate rupture even in unscarred uteri. This case underscores the importance of maintaining high clinical suspicion for uterine rupture regardless of scar status or rupture location. Early recognition and prompt surgical intervention remain essential to minimize maternal and neonatal morbidity and mortality.

Conclusion: Uterine rupture is an uncommon yet potentially life-threatening obstetric complication associated with significant maternal and neonatal morbidity and mortality. While previous uterine scarring, particularly from cesarean section, remains the most prominent risk factor, rupture can also occur in unscarred uteri and in atypical anatomical locations, as demonstrated by the lateral corpus involvement in the present case. These findings underscore the necessity for heightened clinical vigilance, timely recognition, and prompt surgical intervention to optimize maternal and perinatal outcomes.

Keywords: Rupture Uterus, Location Rupture Uterus

Mini Project: Enhancing Maternal Knowledge Through a Pregnancy Journal Book Intervention in Mangunsari Primary Health Care

Abida Zuhra Jatiningtyas^{1*}, Dian Putri Anggraini², Sundari Budi Astuti²

¹Klaten Islamic General Hospital, Klaten, Indonesia

²Mangunsari Primary Health Care, Salatiga, Indonesia

Email: dr.abidazj@gmail.com

ABSTRACT

Background: Pregnant women's knowledge about pregnancy influences their adherence to antenatal care (ANC) programs and their ability to maintain health during pregnancy. The level of maternal knowledge also affects maternal and infant mortality rates, which remain relatively high in Indonesia. Various efforts have been implemented by the government to reduce these rates, including strengthening ANC services at primary health facilities, organizing classes for pregnant women, and distributing maternal and child health (MCH) books. However, many pregnant women are still reluctant to participate in these programs or read the provided materials. Common reasons include inconvenient schedules, limited accessibility, unengaging materials, monotonous teaching methods, and uninteresting activities.

Objectives: This intervention, using a pregnancy journal book, aimed to increase pregnant women's interest in reading and thereby improve their knowledge in the Mangunsari Community Health Center area.

Methods: This cross-sectional study used convenience sampling to recruit pregnant women in the Mangunsari Community Health Center area during November and December 2024. A total of 20 participants were included. Pre-test and post-test assessments were conducted to evaluate changes in knowledge levels before and after the educational intervention using a pregnancy journal book. Data were analyzed descriptively and quantitatively using the Wilcoxon signed-rank test.

Results: The baseline level of pregnancy knowledge among participants ranged from moderate to high. During the pre-test, two participants demonstrated moderate knowledge, and after the intervention, one of them showed improvement. Overall, comparison of pre-test and post-test scores showed an increase in knowledge among participants. The lowest pre-test score was five, and the highest was nine. After the intervention, the lowest post-test score was six and the highest was ten. The mean score increased from 7.75 to 8.25. However, the Wilcoxon signed-rank test yielded a p-value of 0.026 ($p < 0.05$), indicating that the increase in knowledge was statistically significant.

Conclusion: The pregnancy journal book has the potential to improve pregnant women's knowledge regarding the importance of maintaining maternal health during pregnancy. However, further studies with larger samples are recommended.

Keywords: Antenatal care; Health education; Pregnancy journal book; Pregnancy knowledge; Pregnant women

Thirty-Seven Weeks of Pregnancy with Untreated Hebephrenic Schizophrenia: A Case Report

Feby Ramadhiana Pangestu^{1*}, Brahmana Askandar Tjokroprawiro², Budi Prasetyo², Novy Sandhyana Panengah³

¹Lumbang Community Health Center, Kabupaten Probolinggo, Indonesia.

²Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia.

³Master of Epidemiology, Faculty of Public Health, Universitas Diponegoro, Semarang, Indonesia

*Corresponding email: febydhiana22@gmail.com

ABSTRACT

Introduction: Hebephrenic schizophrenia, a subtype of schizophrenia characterized predominantly by affective disturbances and behavioral disorganization, typically emerges in late adolescence or early adulthood. This condition is strongly associated with increased maternal and neonatal morbidity and mortality when left untreated during pregnancy. Management of such cases requires interdisciplinary collaboration between psychiatry and obstetrics, alongside structured family involvement.

Case Presentation: A 31-year-old primigravida was diagnosed with persistent hebephrenic schizophrenia without remission since the age of 19. The patient had not received treatment for more than a decade and only underwent antenatal examination at 31 weeks of gestation. Interdisciplinary assessment concluded that initiation of antipsychotic therapy should be deferred due to advanced gestational age and relatively stable behavioral presentation. The primary focus was shifted to family psychoeducation and supportive psychotherapy.

Discussion: Clinical management initiates with a comprehensive assessment of maternal and fetal health, utilizing obstetric evaluations—such as sonography and fetal monitoring—alongside Mental Status Examination (MSE). A diagnosis of hebephrenic schizophrenia is confirmed by identifying disorganized behavior, fragmented thought, and inappropriate affect. To mitigate risks like self-neglect and psychotic decompensation, an interdisciplinary strategy is employed to monitor medication adherence, evaluate psychosocial support, and develop a sensory-sensitive delivery plan. The successful delivery at the Lumbang Community Health Center underscores the efficacy of interdisciplinary collaboration within primary care. By utilizing persuasive psycho-education, the medical team effectively managed the patient's disorganized behavior, ensuring full cooperation during the critical stages of labor.

Conclusion: Untreated hebephrenic schizophrenia during pregnancy substantially increases obstetric risk due to impaired insight, self-neglect, and executive dysfunction. Early detection, interdisciplinary collaborative management, and structured family engagement are essential to compensate for maternal cognitive dysfunction and to ensure the well-being of both mother and neonate.

Keywords: Maternal care; Successful delivery in hebephrenic schizophrenia patient at Community Health Center; Untreated hebephrenic schizophrenia in pregnancy

The Association of Age, Parity, and Educational Level with the Incidence of Second-Stage Labor in the Emergency Department of Rumah Sakit Ibu dan Anak (RSIA) Bunda Arif, 2024

Mahayu Dian Suryandaru¹, Edy Priyanto²

¹ General Practitioner, Rumah Sakit Ibu dan Anak Bunda Arif, Purwokerto, Indonesia

² Department of Obstetrics and Gynecology, Faculty of Medicine, Jenderal Soedirman University, Purwokerto, Indonesia

ABSTRACT

Background: To ensure optimal observation and appropriate clinical decision-making, pregnant women experiencing signs of labor are recommended to present to healthcare facilities during the first stage of labor. Presentation at the emergency department during second-stage labor may increase the risk of rushed management and obstetric complications. This study aimed to identify the association of age, parity, and educational level with the incidence of second-stage labor at the Emergency Department of RSIA Bunda Arif in 2024.

Methods: A cross-sectional study was conducted using medical record data. Total sampling based on inclusion and exclusion criteria resulted in 427 samples. Bivariate analysis was performed using the Chi-square test.

Results: The analysis showed a statistically significant association between parity and the incidence of second-stage labor at the Emergency Department ($p = 0.005$). Using nulliparous women as the reference group, the prevalence of second-stage labor was higher among primiparous women (PR = 3.01; 95% CI: 1.21–7.52) and multiparous women (PR = 4.20; 95% CI: 1.63–10.83). In contrast, maternal age and educational level were not significantly associated with the incidence of second-stage labor at the Emergency Department ($p > 0.05$).

Conclusion: Parity is significantly associated with the incidence of second-stage labor at the Emergency Department, with a higher prevalence among primiparous and multiparous groups compared to nulliparous women. These findings highlight the importance of early risk identification and targeted antenatal education for these groups.

Keywords: parity; second-stage labor; emergency department; cross-sectional study

Effect of Maternal Lipid-Based Nutrient Supplementation on Human Milk Composition: A Systematic Review

Evina Loviani¹, Hesa Kusuma Admardiarto²

¹General Practitioner, Ajibarang General Public Hospital, Banyumas, Central Java, Indonesia

²Departement of Obstetrics and Gynecology, Ajibarang General Public Hospital, Banyumas, Central Java, Indonesia

ABSTRACT

Introduction: Human milk composition can influence infant health during breastfeeding. This is influenced by various maternal factors, particularly dietary patterns and supplementation.¹ Several studies have evaluated the effects of lipid-based nutrient supplementation (LNS) interventions on maternal and child health, but few have evaluated breast milk composition.² The purpose of this review is to assess the effects of lipid-based nutrient supplementation on breast milk composition.

Method: This systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines. A literature search was performed using PubMed and Google Scholar search engines from studies published from 2010 – 2025. Keywords used included "lipid-based nutrient supplement", "human milk", "breastfeeding", and "lactation". Eligible studies were intervention trials published in English, available in full text, and reporting outcomes related to human milk composition. Reviews, meta-analyses, studies without full-text access, and those not reporting breast milk composition outcomes were excluded.

Result: A total of 121 records were identified, and four studies conducted across five countries (Malawi, Ghana, India, Pakistan, and Guatemala) met the inclusion criteria.³⁻⁶ Two studies included pregnant women with HIV. The maternal age range was 23–27 years. Two studies compared LNS with iron and folic acid capsules (IFA) and multiple micronutrient (MMN) supplements. Maternal LNS showed mixed effects on breast milk composition. Thiamin and riboflavin increased with supplementation during pregnancy and lactation, while no significant effects were observed on oligosaccharides or preconception B-vitamin outcomes. Body-mass index (BMI) and geographic location contributed to variations in milk composition.

Conclusion: Maternal LNS during pregnancy and lactation increased breast milk thiamin and riboflavin, whereas evidence for other milk components was limited or not significant. Further studies are needed to assess the effects of LNS on pregnant and breastfeeding mothers and their impact on long-term infant growth.

Keywords: breastfeeding, human milk, lactation, lipid-based nutrient supplements

Kehamilan dengan Penyakit Moyamoya: Sebuah Laporan Kasus

Shila Rubianti Prawirodihardjo¹, Catherine¹, Leo Prawirodihardjo¹

¹Hermina Podomoro Hospital Jakarta, Indonesia

Email: shilarubianti@gmail.com

ABSTRAK

Latar Belakang: Kehamilan pada pasien dengan penyakit serebrovaskular, seperti Penyakit Moyamoya, merupakan kondisi berisiko tinggi yang memerlukan penatalaksanaan multidisiplin.

Laporan Kasus: Pasien Wanita usia 36 tahun, G3P2A0, usia kehamilan 22 minggu datang ke IGD dengan keluhan perut terasa kencang dan kram sejak subuh. Riwayat obstetri anak pertama lahir spontan tahun 2010 dan anak kedua dengan sectio caesarea tahun 2012. Pasien memiliki komorbid penyakit Moyamoya dan telah menjalani operasi revaskularisasi pada Maret 2025. Pemeriksaan fisik dalam batas normal tanpa defisit neurologis. Pemeriksaan obstetri tinggi fundus sesuai usia kehamilan dan terdapat his. Ultrasonografi menunjukkan kehamilan tunggal intrauterin 22 minggu, janin hidup dengan denyut jantung 120 kali per menit, taksiran berat 500 gram, plasenta posterior, dan cairan ketuban cukup. Mempertimbangkan risiko maternal, dilakukan tindakan sectio caesarea disertai tubektomi bilateral. Bayi lahir dengan berat 500 gram dan meninggal 10 menit pascakelahiran. Kondisi ibu pascaoperasi stabil dan pemulihan berjalan baik.

Diskusi: Kehamilan dengan penyakit Moyamoya meningkatkan risiko komplikasi neurologis akibat perubahan tekanan darah selama kehamilan dan persalinan. Penelitian sebelumnya menunjukkan bahwa revaskularisasi sebelum atau selama kehamilan dapat menurunkan risiko kejadian serebrovaskular, meskipun tidak sepenuhnya menghilangkan risiko tersebut dan sectio caesarea sering dipilih untuk menghindari lonjakan tekanan intrakranial akibat mengejan. Pada kasus ini, riwayat revaskularisasi, usia maternal lanjut, kontraksi aktif usia 22 minggu, dan potensi risiko perdarahan serebral menjadi dasar pertimbangan terminasi operatif disertai sterilisasi definitif.

Kesimpulan: Pada usia gestasi previabel dengan risiko maternal tinggi, keselamatan ibu menjadi prioritas utama dalam pengambilan keputusan klinis. Penatalaksanaan yang tepat dan pemantauan ketat pascaoperasi berperan penting dalam mencapai luaran maternal yang optimal.

Kata kunci: Penyakit Moyamoya, Kehamilan risiko tinggi

Induced Lactation in a Nulliparous Woman as a Mahram Solution for an Adopted Infant: A Case Report

Munifah Ashlihati^{1,6}, Nasrudin Andi Mappaware^{2,6}, Ida Royani^{3,6}, Wahyuni Saddang^{4,7}, Marhamah²,
Ronaldo August Rambulangi⁵, Yulia Himawati⁸

¹Study Programme of Obstetrician and Gynaecologist, Faculty of Medicine, Universitas Muslim Indonesia, Indonesia

²Department of Obstetrics and Gynaecology/Social Obstetrics and Gynaecology, Faculty of Medicine, Universitas Muslim Indonesia, Indonesia

³Department of Islamic Medical Sciences, Faculty of Medicine, Universitas Muslim Indonesia, Indonesia

⁴Department of Obstetrics and Gynaecology/Fertility and Reproductive Endocrinology, Faculty of Medicine, Universitas Muslim Indonesia, Indonesia

⁵Department of Obstetrics and Gynaecology, Faculty of Medicine, Universitas Muslim Indonesia, Indonesia

⁶Ibnu Sina YW-UMI Hospital, Makassar, Indonesia

⁷Mother and Child Hospital "ANANDA" Makassar, Indonesia

⁸D'maryam Primary Clinic, Yogyakarta, Indonesia

Corresponding author: nasrudin.nasrudin@umi.ac.id

ABSTRACT

Background: Induced lactation is the process of stimulating milk production in women who have not recently experienced pregnancy, providing significant benefits for both adoptive mothers and their infants. In Islamic tradition, successful breastfeeding establishes "foster kinship" (Rada'ah), which confers mahram status to the child, enabling legal and spiritual integration into the family. This report describes the physiological, pharmacological, and psychosocial aspects of induced lactation in a nulliparous woman.

Case Presentation: A 25-year-old nulliparous woman with a history of primary infertility and previous ovarian cyst surgery sought induced lactation after adopting a newborn infant. Given the infant's recent birth, an immediate induction protocol was initiated, consisting of domperidone 10 mg three times daily, nutritional supplementation, and a structured breast-pumping schedule. Despite challenges including work-related stress, medication-induced anxiety, and the infant's diagnosis of tongue-tie and lip-tie, the patient successfully achieved milk production.

Discussion: The success of induced lactation relies on the synergy between pharmacological dopamine antagonists and consistent nipple stimulation to elevate prolactin levels. Psychosocially, the success of breastfeeding served as a powerful validation of the patient's maternal identity. Furthermore, achieving foster kinship through induced lactation fulfilled essential cultural and religious requirements, allowing the child to be recognized as a mahram within the Islamic framework. This case emphasizes the importance of integrating nutritional counseling such as the use of olive oil and galactagogues with psychosocial support to overcome systemic and personal barriers during the induction.

Conclusion: Induced lactation to achieve mahram status represents a viable and transformative intervention for adoptive mothers. A multidisciplinary approach involving hormonal preparation, pharmacological support, and robust psychosocial counseling is essential to manage expectations, enhance success, and minimize side effects.

Keywords: induced lactation; adoptive mother; domperidone; breastfeeding; foster kinship; mahram; psychosocial outcomes.

Perbandingan Akurasi Rumus Johnson Toshach dengan Pemeriksaan Ultrasound untuk Prediksi Berat Badan Lahir Bayi Spontan Pervaginam di RS PKT Bontang Periode Februari - April 2025

dr Dicky Ardian¹; Dr. dr. I Putu Satrya Wijaya, Sp. OG, Subsp Obginsos, FISQua²
Departemen Kesehatan Ibu dan Anak Rumah Sakit Pupuk Kaltim Bontang, Kalimantan Timur
dickyardn@gmail.com

ABSTRAK

Latar Belakang: Estimasi berat janin yang akurat merupakan komponen penting dalam manajemen persalinan untuk menurunkan morbiditas dan mortalitas perinatal.

Tujuan: Membandingkan akurasi rumus Johnson Toshach dengan pemeriksaan ultrasonografi dalam memprediksi berat badan lahir bayi spontan pervaginam.

Metode: Penelitian cross-sectional dilakukan terhadap 99 ibu hamil yang melahirkan spontan pervaginam di Rumah Sakit Pupuk Kaltim Bontang periode Februari-April 2025. Data taksiran berat janin menggunakan rumus Johnson Toshach dan ultrasonografi dibandingkan dengan berat lahir aktual menggunakan uji Wilcoxon Signed-Rank Test. Akurasi dinilai dengan Mean Absolute Error (MAE) dan Mean Absolute Percentage Error (MAPE).

Hasil: Ultrasonografi menunjukkan tidak ada perbedaan signifikan dengan berat lahir aktual ($p=0,553$) dengan selisih rata-rata 24,17 gram, sedangkan rumus Johnson Toshach menunjukkan perbedaan signifikan ($p=0,000$) dengan selisih 134,53 gram. Nilai MAE ultrasonografi (239,8 gram) lebih rendah dibanding Johnson Toshach (243,2 gram). Nilai MAPE keduanya kurang dari 10% (7,94% vs 7,83%).

Kesimpulan: Ultrasonografi lebih akurat dibanding rumus Johnson Toshach dalam memprediksi berat lahir bayi, meskipun keduanya tergolong sangat akurat secara klinis.

Kata Kunci: taksiran berat janin, rumus Johnson Toshach, ultrasonografi

Descriptive Study on Postpartum Depression Level in Postpartum Mothers at RSUD Bali Mandara from March 2025 to January 2026

Authors:

dr. Gede Giofany Achaldy Indra Pradnya Rudi Suryantara. S.Ked
dr. I. A. Indira Mandini Manuaba, M.Biomed, Sp.OG, FEGRF, FI
dr. Putu Trisna Handayani, Sp.OG
dr. Ida Ayu Putu Asthi Damayanti, Sp.KJ
Department of Obstetrics and Gynecology, Bali Mandara Regional
General Hospital, Bali, Indonesia

ABSTRACT

Background: Postpartum depression is a psychological problem that often occurs in mothers after giving birth. This can affect the mother's daily activities, especially in caring for and maintaining her baby. If it is not handled properly, it can endanger both the mother's and the baby's condition. Therefore, screening is needed for mothers after delivery.

Methods: This study uses a quantitative descriptive method with a cross-sectional approach, conducted at Bali Mandara Regional Hospital (RSUD Bali Mandara). The sample size was 275 respondents from March 2025 to January 2026. The instrument used was the EPDS questionnaire (Edinburgh Postnatal Depression Scale), and the study focused on postpartum mothers on days 1–5 after delivery.

Discussion Results: The descriptive study found that most respondents experienced mild depression, with 157 people (57%). Meanwhile, respondent characteristics that were more likely to be associated with postpartum depression—especially severe depression—were: age >35 years (3%), not being married (6%), multiparity (5%), Sectio Caesarea (30%), home/birth at village (kampung) (67%), with complications (24%), working (9%), and inability to breastfeed directly (20%).

Conclusion: This study shows that most postpartum mothers at RSUD Bali Mandara from March 2025 to January 2026 experienced mild depression. This indicates that every postpartum mother has a risk of experiencing stress after childbirth, so early identification is needed to prevent postpartum depression.

Keywords: Postpartum Mothers, Postpartum Depression, EPDS

Optimizing PPH Prevention in LMICs: A Systematic Review Comparing Heat-Stable Carbetocin and Oxytocin Across Diverse Delivery Modes

Putu Mega Asri Dhamasari¹ | Komang Tresna² | IGN Wiranta Permadi³

¹General Practitioner, Bhayangkara Hospital, West Nusa Tenggara

²Obstetrics and Gynecology Specialist, Division of Social Obstetrics and Gynecology, Bhayangkara Hospital, West Nusa Tenggara

³Obstetrics and Gynecology Specialist, Bhayangkara Hospital, West Nusa Tenggara

ABSTRACT

Background: Postpartum hemorrhage (PPH) remains the leading cause of maternal mortality in Low- and Middle-Income Countries (LMICs). While oxytocin is the standard-of-care, its requirement for a continuous cold chain and its short half-life present significant logistical barriers in remote, resource-limited settings. This systematic review evaluates the clinical efficacy and logistical advantages of Heat-Stable Carbetocin (HSC) as a pragmatic alternative to oxytocin in LMIC settings.

Methods: A systematic analysis was conducted on seven clinical studies (2016–2025) involving 1,526 participants from LMIC regions, specifically Egypt and India. The review synthesized data across various delivery modes—vaginal, elective cesarean, and emergency cesarean sections. The primary outcome was the incidence of PPH, while secondary outcomes included the requirement for additional uterotonics, blood transfusion, total blood loss, and hemoglobin (Hb) decline.

Results and Discussion: Regarding the primary outcome, carbetocin demonstrated a robust profile in preventing PPH, with an incidence of PPH >500 mL ranging from 2.1%–20.0% compared to 3.1%–34.0% for oxytocin. In high-risk scenarios, carbetocin effectively reduced severe PPH (>1000 mL) (range: 0.0%–7.43% vs. 0.0%–18.86% for oxytocin). For secondary outcomes, carbetocin significantly lowered the necessity for rescue uterotonics (range: 0.0%–23.7% vs. 9.8%–85.0%). Furthermore, carbetocin showed superior Hb stability (mean decline: 0.27–0.9 g/dL vs. 0.55–1.7 g/dL). The discussion emphasizes that carbetocin's thermal stability ensures pharmacological potency in remote areas without refrigeration, addressing a critical health equity gap in LMICs.

Conclusion: Heat-stable carbetocin offers a superior pharmacological and logistical profile for PPH prevention in LMICs. By eliminating cold-chain dependency while ensuring high clinical efficacy, it serves as a critical intervention for reducing maternal morbidity in the world's most vulnerable and resource-constrained populations.

Keywords: Carbetocin, Oxytocin, Postpartum Hemorrhage, LMIC

Double Burden dalam Kehamilan : Peran Layanan Primer dalam Deteksi Risiko Komplikasi sebagai Strategi Penurunan AKI dan AKB

I Ketut Argya Reswara¹, I Wayan Agung Indrawan²

¹Puskesmas Gerokgak 1

Email: argyareswara1@gmail.com

ABSTRAK

Latar Belakang: Angka Kematian Ibu (AKI) dan Angka Kematian Bayi (AKB) masih menjadi tantangan dalam konteks double burden kesehatan di Indonesia. Kabupaten Buleleng menunjukkan tren yang memerlukan penguatan sistem layanan primer sebagai garda terdepan deteksi dan manajemen risiko maternal.

Tujuan: Menganalisis faktor individu dan karakteristik pelayanan kesehatan primer yang berhubungan dengan kejadian komplikasi kehamilan sebagai determinan risiko peningkatan AKI dan AKB.

Metode: Studi observasional analitik dengan desain cross-sectional menggunakan total sampling terhadap 433 ibu hamil di Puskesmas Gerokgak I periode November 2025–Februari 2026. Variabel independen meliputi usia maternal, indeks massa tubuh (BMI), jenis kunjungan, status kepesertaan JKN, dan sistem rujukan. Analisis dilakukan menggunakan uji Chi-square, Mann-Whitney, dan regresi logistik multivariat ($\alpha < 0,05$).

Hasil: Sebanyak 50,1% ibu hamil mengalami komplikasi kehamilan. Rerata usia kelompok komplikasi lebih tinggi dibandingkan kelompok sehat ($30,15 \pm 6,77$ vs $26,82 \pm 5,39$ tahun). Rerata BMI kelompok komplikasi juga lebih tinggi ($27,65 \pm 5,48$ vs $25,88 \pm 4,24$). Analisis multivariat menunjukkan usia >35 tahun dan BMI obesitas memiliki hubungan bermakna terhadap kejadian komplikasi kehamilan ($p < 0,05$). Sistem rujukan aktif pada 49,9% kasus menunjukkan fungsi gatekeeping berjalan, namun tingginya proporsi obesitas dan komorbid menunjukkan adanya tekanan double burden di layanan primer.

Kesimpulan: Layanan kesehatan primer memiliki peran strategis dalam deteksi dini, manajemen risiko, dan rujukan komplikasi kehamilan. Faktor usia maternal dan obesitas merupakan determinan dominan komplikasi kehamilan. Penguatan skrining risiko berbasis BMI, optimalisasi ANC terpadu, serta percepatan sistem rujukan menjadi kunci dalam menekan AKI dan AKB di wilayah layanan primer.

Kata Kunci: AKI, AKB, komplikasi kehamilan, layanan primer, BMI, sistem rujukan

Obstetric and Maternal Determinants of Low Birth Weight: A Retrospective Case-Control Study at RSKIA Arvita Bunda (2020–2026)

Ariva Syiva'a^{1*}, Afiya Fathi², Rizqi Anisah Yumna², Abida Zuhra Jatiningtyas³

¹Arvita Bunda Mother and Child Hospital, Yogyakarta, Indonesia

²Sebelas Maret University, Surakarta, Indonesia

³Islamic General Hospital Klaten, Klaten, Indonesia

Email: arivasyivaa@gmail.com

ABSTRACT

Background: Low birth weight (LBW) remains a leading cause of neonatal morbidity and mortality. It contributes substantially to high infant mortality rates. Several obstetric and maternal factors, including maternal age, gestational age, parity, nutritional status, hemoglobin level, and preeclampsia, have contributed to the occurrence of LBW. Identifying clinical determinants at the healthcare facility level is essential to enhance early detection and optimize the management of pregnancy complications.

Methods: This is an analytical observational study with a retrospective case-control design using secondary data from the medical records of mothers who delivered at RSKIA Arvita Bunda between January 2020 and January 2026. A total of 120 eligible subjects were included. Bivariate analysis was conducted using the Chi-square test. The strength of association was expressed as odds ratios (ORs) with 95% confidence intervals (CIs).

Results and Discussion: Among the 120 subjects, 40 (33.3%) of them delivered LBW infants. Maternal age was significantly associated with LBW ($p = 0.041$), with the highest proportion observed among mothers aged <20 years. Gestational age demonstrated a strong association ($p < 0.001$), with preterm delivery accounting for the highest proportion of LBW cases. Parity was also significantly associated with LBW ($p = 0.016$). Preeclampsia showed the strongest association with LBW ($p = 0.002$); mothers with preeclampsia had a 13.88-fold increased risk of delivering LBW infants (95% CI: 1.79–107.45). Anemia and nutritional status did not substantially correlate with LBW.

Conclusion: Obstetric and maternal factors, particularly preeclampsia, are significant determinants of LBW. Implementation of early identification and clinical management of pregnancy complications may contribute to reduced LBW incidence and improving neonatal outcomes.

Keywords: low birth weight; maternal factors; obstetric factors; parity; preeclampsia

Case of Giant Uterine Myoma during First Trimester Pregnancy at Pelni Hospital: A Case Report

¹Muhammad Dimas Reynadi, ²Adi Sukrisno

¹Internship Doctors of Obstetrics and Gynecology Division

²Head of Functional Medical Staff Group of of Obstetrics and Gynecology Department of Obstetrics and Gynecology, Pelni Hospital, West Jakarta, Special Capital Region of Jakarta

ABSTRACT

Uterine myoma is a benign tumor originating from the smooth muscle of the uterus. In general, uterine myomas are asymptomatic and are found incidentally during ultrasound examination of pregnancy. We report that a 37-year-old woman with G2P1A0 admitted that she was 7 weeks pregnant and came to Pelni Hospital she was referred by the local community health center where she was examined with a USG and was discovered that there was a giant mass that was suspected to be a uterine myoma with bulging and tightness sensation on her abdominal that started couple weeks ago before MRS. Complaints like the discharge of blood mucus through the vagina and pain around the abdominal region are not present. The patient was married once and the distance between the first child and the second is 4 years.

The patient's vital signs were within normal limits. On physical examination, there was a palpable mass with a smooth surface that seemed to stick to the uterus. When the USG were performed in the hospital, it was discovered that there is a giant uterine myoma with the size of approximately 19 x 10 x 15 mm. The patient was diagnosed with G2P1A0 UK 7 weeks + Single live intra uterine + uterine myoma intramural. The patient underwent myomectomy, the outcome of surgery is that the pregnancy can be preserved by the existing fetal heart rate from the USG and mother was good. Intraoperative findings found that there were 1 giant uterine myomas measuring more than 25 cm which is located in the intramural of the uterus.

Kerasukan ataukah Kejang, Studi Kasus yang Dialami Wanita 18 Tahun dengan G1p000 35-36 Minggu: Sebuah Laporan Kasus Mengenai ANC dari Ujung Barat Pulau Madura

Moh. Rizki Wardany, Nanda Lilian Putri Dianti H
Puskesmas Geger Kabupaten Bangkalan

ABSTRAK

Latar Belakang: Di Indonesia jumlah AKI (Angka Kematian Ibu) tahun 2022 sebanyak 4005 orang, 23% diantaranya terjadi dikarenakan eklampsia. Di wilayah kerja dinas kabupaten bangkalan pada tahun 2024 terdapat 8 kasus AKI.

Kasus: Wanita 18 tahun G1P000 uk 35-36 minggu dibawah keluarga dalam keadaan lemah. Keluarga mengatakan 3 jam sebelum dibawah ke Puskesmas pasien mengalami kerasukan mahluk halus sehingga mengalami kejang-kejang. Kejang berlangsung kurang lebih 8 menit, setelah kejang pasien sadar dan terasa lemas. Terdapat pandangan kabur dan nyeri kepala. Gerak janin tidak dirasakan sejak 15 jam yang lalu. Riwayat ANC 2 kali dan tidak ditemukan adanya tekanan darah tinggi sebelumnya. Tekanan darah 168/101 mmHg, laju jantung 103x/menit, laju napas 22x/menit, suhu 36°C, SpO2 100% dengan nasal kanul 2 lpm. Edema pretibial (+), DJJ (-). Pasien diberikan terapi awal berupa cairan dan diberikan MgsO4 sesuai protap. Pasien rujuk dengan diagnosa G1P000 uk 35-36 minggu dengan dengan IUFD disertai Eklampsia. Pasien meninggal saat perjalanan menuju rumah sakit.

Pembahasan: Preeklamsia menjadi salah satu penyebab morbiditas dan mortalitas ibu maupun janin di Indonesia. Preeklamsia didefinisikan sebagai hipertensi setelah usia kehamilan 20 minggu disertai proteinuria atau tanda disfungsi organ. Eklampsia merupakan preeklampsia yang mengalami komplikasi kejang tonik klonik dan sifatnya umum. Pada kasus ini pasien tidak memiliki riwayat ANC yang baik. Terdapat kendala berupa jarak dan status ekonomi rendah. Masyarakat Madura masih mempercayai kerasukan, hal ini menjadi salah satu faktor keterlambatan penanganan pada pasien tersebut. Konseling antenatal saat posyandu berlangsung singkat, pasien hanya menerima informasi tentang kondisi pasien, janin dan tidak mendapat informasi mengenai komplikasi kehamilan, persiapan kelahiran bayi dan masa nifas.

Kesimpulan: ANC yang baik dan berkualitas menjadi kunci utama untuk pencegahan komplikasi preeklampsia khususnya di daerah terpencil.

Kata Kunci: AKI (Angka Kematian Ibu), Eklampsia, ANC

HEXCOSystem 6–6–6: A Conceptual Reproductive Health Ecosystem Integrating Multidimensional Determinants and Local Wisdom to Strengthen Maternal–Neonatal Outcomes

I Gusti Ngurah Made Bayuningrat¹, Made Indra Wijaya¹

¹Faculty of Medicine and Health Sciences, Warmadewa University, Bali–Indonesia

ABSTRACT

Background: Maternal and neonatal mortality remain major public health challenges, particularly in low- and middle-income settings. These challenges are further compounded by the double burden of disease and fragmented healthcare systems. Current approaches often fail to integrate multidimensional determinants, service delivery, and sociocultural context, including local wisdom.

Methods: This study employs a conceptual modeling approach based on systems thinking. The HEXCOSystem 6–6–6 framework integrates six core determinants (biological, behavioral, health services, socioeconomic, environmental, and translational), six service domains, and six analytical dimensions. The model incorporates an adaptive feedback loop to support continuous learning and system adaptation.

Results/Discussion: The HEXCOSystem demonstrates a structured and integrated ecosystem linking determinants, service domains, and analytical processes. The framework highlights system-level interactions and provides a comprehensive approach to addressing fragmentation in maternal health systems. The inclusion of local wisdom enhances cultural relevance and potential acceptability. The adaptive feedback mechanism enables dynamic system improvement in response to evolving healthcare challenges.

Conclusion: HEXCOSystem 6–6–6 provides a novel and integrative ecosystem-based framework for reproductive health system strengthening. The model offers a strategic and adaptable approach to improving maternal–neonatal outcomes in complex healthcare settings.

Keywords: HEXCOSystem; Maternal Health; Ecosystem; Local Wisdom; Health System

KELORA: A Translational Local Wisdom-Based Innovation Derived from HEXCOSystem to Support Maternal Care and Improve Maternal–Neonatal Outcomes

I Gusti Ngurah Made Bayuningrat¹, Made Indra Wijaya¹

¹Faculty of Medicine and Health Sciences, Warmadewa University, Bali–Indonesia

ABSTRACT

Background: Maternal health challenges remain significant, particularly in the context of postpartum complications and the double burden of disease. Limited integration of local wisdom into healthcare interventions reduces effectiveness and acceptability. Translational approaches are needed to bridge conceptual health system models with practical innovations.

Methods: This study adopts a conceptual translational approach based on the HEXCOSystem framework. KELORA is developed as a local wisdom-based herbal formulation intended to support postpartum care. The innovation integrates clinical considerations, community engagement, and culturally grounded practices within a system-based approach.

Results/Discussion: KELORA represents a translational application of the HEXCOSystem, bridging theoretical frameworks and practical healthcare solutions. The innovation demonstrates potential to enhance wound healing, support postpartum recovery, and improve community acceptance of maternal health interventions. Its integration into clinical and community settings reflects a multidimensional and adaptive approach to maternal care.

Conclusion: KELORA provides a practical example of translational innovation derived from an ecosystem-based health framework. The integration of local wisdom into maternal healthcare offers a promising and culturally responsive strategy to strengthen maternal–neonatal outcomes.

Keywords: KELORA; Translational Innovation; Local Wisdom; Maternal Health; HEXCOSystem

Maternal Near-Miss in Suspected Amniotic Fluid Embolism: An Integrated HEXCOSystem-Based Emergency Response to Prevent Maternal Mortality

I Gusti Ngurah Made Bayuningrat, Made Indra Wijaya
Faculty of Medicine and Health Sciences, Warmadewa University, Bali, Indonesia

ABSTRACT

Background: Amniotic fluid embolism (AFE) is a rare but catastrophic obstetric emergency contributing to maternal mortality. It is characterized by sudden cardiorespiratory collapse followed by severe coagulopathy. Reducing maternal mortality requires an integrated obstetric emergency response through system readiness, rapid clinical decision-making, and coordinated multidisciplinary care, supported by local wisdom values such as bhakti and teamwork.

Case: A 37–38 weeks pregnant woman with placenta previa totalis and transverse lie underwent cesarean section. The neonate was delivered in good condition. Shortly after delivery, the patient developed sudden apnea and cardiac arrest without prior comorbidities. Immediate resuscitation achieved return of spontaneous circulation (ROSC), followed by intubation. Within one hour postoperatively, the patient developed massive postpartum hemorrhage due to refractory uterine atony. Emergency hysterectomy was performed as a life-saving intervention, successfully achieving hemostasis. The patient was stabilized and prepared for referral.

Discussion: The clinical course demonstrates a classic biphasic pattern of suspected AFE, involving initial cardiopulmonary collapse followed by coagulopathy leading to severe hemorrhage. Although unpredictable, early recognition and integrated emergency response significantly improve outcomes. Using the HEXCOSystem framework, this case highlights the importance of integrating biological triggers, rapid clinical response, system readiness, and decisive surgical intervention. Local wisdom values such as compassion (bhakti), teamwork, and collective responsibility further enhance coordination in emergency situations. Favorable prognosis in this case was achieved through early resuscitation and prompt hemorrhage control.

Conclusion: AFE should be suspected in cases of sudden maternal collapse. Integrated emergency response based on HEXCOSystem principles, supported by local wisdom, plays a crucial role in improving prognosis and preventing maternal mortality.

Keywords: Amniotic fluid embolism; maternal near miss; postpartum hemorrhage; hysterectomy; maternal mortality

**Exploring Maternal Mental Health Status and Sociodemographic Determinants:
A Cross-Sectional Study**

Pramudita Putri Dyatmika Mandegani¹, Shinta Prawitasari¹, Fitriana Murriya Ekawati², Winengku Basuki Adi³

¹Department of Obstetrics and Gynecology, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

²Department of Family Medicine and Primary Care, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

³Department of Psychiatry, Sardjito Hospital, Yogyakarta, Indonesia

Corresponding author: Pramudita Putri Dyatmika Mandegani,

E-mail: pramudita.putri@mail.ugm.ac.id

ABSTRACT

Background: Anxiety and depression are common during pregnancy and are established predictors of postpartum depression. Integrating mental health screening into antenatal care (ANC) is increasingly recognized as essential for comprehensive maternal health. However, evidence on maternal mental health and its sociodemographic determinants in Indonesia, particularly within primary health care (Puskesmas), remains limited. This study aimed to assess mental health status and associated sociodemographic factors among pregnant women in Bantul.

Methods: A cross-sectional study was conducted at six Puskesmas in Bantul between July and December 2025. A total of 201 pregnant women were recruited using purposive sampling. We assessed maternal mental health using the Edinburgh Postnatal Depression Scale (EPDS), applying a cut-off score of ≥ 10 to identify women at risk of antenatal depression during first trimester. Data were analyzed using Chi-square, Fisher's exact test, and binary logistic regression.

Results: Overall, 32.8% of participants were at risk of antenatal depression. Bivariate analysis identified significant associations with unplanned pregnancy (OR 2.84; 95% CI: 1.18–6.80; $p=0.04$), lack of family/partner support (OR 2.78; 95% CI: 1.13–6.82; $p=0.03$), and income above the minimum wage (OR 2.84; 95% CI: 1.18–6.80; $p=0.02$). Although unmarried status (OR 3.17; 95% CI: 0.52–19.43; $p=0.30$) and higher educational attainment (OR 0.53; 95% CI: 0.27–1.05; $p=0.70$) showed trends toward increased or reduced risk, these were not statistically significant. After adjusting for sociodemographic variables, family income remained the sole independent predictor (aOR 3.43; 95% CI: 1.21–9.61; $p=0.02$).

Conclusion: Nearly one-third of pregnant women were at risk of antenatal depression, with socioeconomic vulnerability emerging as the key determinant. These findings emphasize the need for integrated psychosocial intervention and reinforce the importance of universal mental health screening during ANC to enable early detection and comprehensive management.

Keywords: antenatal depression; Edinburgh Postnatal Depression Scale; maternal mental health

Comparison of the Accuracy of the Johnson Toshach Formula with Ultrasound Examination for Prediction Birth Weight of Spontaneous Vaginal Birth at Pkt Bontang Hospital in The Period of February - April 2025

Dicky Ardian, MD¹; I Putu Satrya Wijaya, Sp. OG, Subsp Obginsos, FISQua

¹Pupuk Kaltim Hospital, Bontang, Indonesia

Corresponding author Dicky Ardian, MD. Pupuk Kaltim Hospital, Bontang. Jl. Oxygen no. 1, Bontang, Kalimantan Timur, Indonesia.

Email: dickyardn@gmail.com

ABSTRACT

Background: Accurate fetal weight estimation is a crucial component in labor management to reduce perinatal morbidity and mortality.

Objective: To compare the accuracy of Johnson Toshach formula with ultrasound examination in predicting birth weight of spontaneous vaginal delivery.

Methods: A cross-sectional study was conducted on 99 pregnant women who delivered spontaneously vaginally at Pupuk Kaltim Bontang Hospital during February-April 2025. Estimated fetal weight data using Johnson Toshach formula and ultrasound were compared with actual birth weight using Wilcoxon Signed-Rank Test. Accuracy was assessed with Mean Absolute Error (MAE) and Mean Absolute Percentage Error (MAPE).

Results: Ultrasound showed no significant difference with actual birth weight ($p=0.553$) with mean difference of 24.17 grams, while Johnson Toshach formula showed significant difference ($p=0.000$) with difference of 134.53 grams. Ultrasound MAE value (239.8 grams) was lower than Johnson Toshach (243.2 grams). MAPE values of both were less than 10% (7.94% vs 7.83%).

Conclusion: Ultrasound is more accurate than Johnson Toshach formula in predicting birth weight, although both are clinically very accurate.

Keywords: estimated fetal weight, Johnson Toshach formula, ultrasonography

Optimizing the Use of the Maternal and Child Health Book for Maternal Health Education in Kulon Progo, Indonesia

Sella Zenitasari^{1,2}, Shinta Prawitasari¹, Eugenius Phywai Ganap¹, Diannisa Ikarumi Enisar Sangun¹, Syah Rini Wisdayanti¹

¹Department of Obstetrics and Gynecology, Faculty of Medicine, Nursing, and Public Health, Universitas Gadjah Mada, Yogyakarta, Indonesia

²Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Pendidikan Indonesia, Bandung, Indonesia

ABSTRACT

Background: The utilization of the Maternal and Child Health Book (MCHB) as a health education tool remains suboptimal, despite its role as a national program aimed at improving maternal and child health. Limited maternal understanding of the MCHB's content may hinder the effective use of the health information it provides. This activity aimed to improve mothers' knowledge of using the MCHB as a health education tool in the Samigaluh I Community Health Centre, Kulon Progo Regency.

Methods: This community service activity used an interactive health education approach targeting pregnant women and breastfeeding mothers. The evaluation used a pretest–posttest design to measure changes in participants' knowledge before and after the intervention. A total of 29 participants took part in this activity.

Results: The activity increased participants' knowledge, with mean scores rising from 80.69 (pre-test) to 96.03 (post-test), showing a statistically significant difference ($p < 0.001$). The proportion of participants in the 'good' knowledge category increased from 75.9% to 100%. Knowledge also increased across all domains, particularly in childbirth and the detection of pregnancy danger signs.

Conclusion: Education on the use of the MCHB effectively improves mothers' knowledge of maternal and child health. The development of MCHB-based educational modules supports community health workers and healthcare staff in delivering health information more systematically. Optimizing the use of the MCHB at the primary healthcare level may improve maternal health literacy and support improvements in maternal and child health outcomes.

Keywords: Maternal and Child Health Handbook, MCHB, maternal knowledge, maternal and child health, community service

Term Abdominal Pregnancy in an HIV-Positive Adolescent with Inadequate Antenatal Care: A Case Report Highlighting Sociocultural Vulnerability and Health System Gaps

Tesya Gamananda Puluhulawa¹, Maimun Ihsan², Muhammad Rizky Pratama Saiu¹

¹Faculty of Medicine, Universitas Negeri Gorontalo, Gorontalo, Indonesia

²Department of Obstetrics and Gynaecology, RSUD Prof. Dr. Aloi Saboe, Gorontalo, Indonesia

ABSTRACT

Background: Adolescent pregnancy is associated with increased maternal risk, particularly in low-resource settings with limited access to adequate antenatal care. These risks are further amplified among adolescents living with HIV and those experiencing complex sociocultural vulnerabilities, including migration, social isolation, mental health disorders, and engagement in transactional sex, limiting timely access to healthcare. Abdominal pregnancy, a rare and life-threatening condition, is often diagnosed late in such contexts.

Objective: To report a rare case of term abdominal pregnancy in an HIV-positive adolescent with inadequate antenatal care and to highlight the impact of complex sociocultural and clinical vulnerabilities, as well as healthcare system gaps, on delayed diagnosis and adverse neonatal outcomes.

Case: An 18-year-old adolescent living with HIV presented with abdominal pain at term. She had a history of inadequate antenatal care, with only one visit during pregnancy, and no prior diagnosis of abdominal pregnancy. The patient also had multiple sociocultural vulnerabilities, including migration, lack of family support, engagement in transactional sex, and underlying schizophrenia, contributing to poor access and continuity of care. Ultrasound examination revealed a 37–38 week abdominal pregnancy with breech presentation. An emergency laparotomy was performed, confirming the diagnosis, and the fetus was delivered. The placenta was left in situ, followed by planned intramuscular methotrexate administration. The maternal outcome was favorable; however, early neonatal death occurred on the second day of life.

Discussion: This case illustrates how intersecting clinical and sociocultural vulnerabilities, combined with gaps in healthcare systems, contribute to delayed diagnosis and poor outcomes.

Conclusion: This case underscores the urgent need for integrated, adolescent-friendly, and culturally responsive reproductive health services to improve early detection and continuity of care in vulnerable populations.

Keywords: Abdominal pregnancy; adolescent pregnancy; HIV; antenatal care; sociocultural vulnerability

Implementing the Edinburgh Postpartum Depression Scale in Obstetric Care: an Evidence-Based Case Review

Suciana A Suyanto¹, Hermawan², Victor P A Santawi³
^{1,2}Siloam Hospital Putera Bahagia, Cirebon,
³Medistra Hospital, Jakarta

ABSTRACT

Postpartum depression remains a significant cause of maternal health issues, often hidden by a focus on physical obstetric factors. In obstetric care, the lack of standardized mental health screening frequently results in missed opportunities for early intervention, especially when psychological distress presents as physical symptoms.

This paper examines the case of a 28-year-old primigravida initially admitted for refractory Hyperemesis Gravidarum. Clinical investigation showed that the patient's nutritional non-compliance was a manifestation of severe depressive disorder related to an unplanned pregnancy. Using the 10-item Edinburgh Postnatal Depression Scale (EPDS), high-risk scores were confirmed, leading to immediate psychiatric intervention.

A descriptive review of the case was conducted along with a literature analysis of the utility of EPDS in obstetric care. The study assesses the scale's sensitivity and its practicality as a routine diagnostic tool in resource-limited settings.

Evidence indicates that somatic symptoms during pregnancy often mask underlying depressive disorders. Incorporating the full 10-item EPDS into routine Antenatal Care (ANC) allows for objective measurement of maternal distress. The literature supports the view that standardized EPDS procedures enhance detection rates and simplify referral pathways to higher-level psychiatric services.

Implementing the Edinburgh Postpartum Depression Scale as a "fifth vital sign" is crucial for comprehensive obstetric care. Routine screening during pregnancy is a cost-effective strategy to bridge the gap between physical and mental health, ensuring that psychological risks are identified and treated with the same clinical attention as obstetric emergencies.

Keywords: Postpartum Depression, EPDS, Obstetric Care, Antenatal Care, Maternal Mental Health.

A Gold Nanoparticle-Modified Paper-Based Electrochemical Point-of-Care Biosensor for Early Antenatal Screening of Preeclampsia Using Urinary hsa-miRNA-1-3p Biomarker in Low-Resource Settings

Mauliya Sri Sukmawati Wahyudi¹, Nidia Nursafitri², Endry Winarko³

¹General Practitioner, dr. Haryoto Regional General Hospital, Lumajang, East Java, Indonesia

²General Practitioner, Wijaya Kusuma Hospital, Lumajang, East Java, Indonesia

³Department of Obstetrics and Gynecology, dr. Haryoto Regional General Hospital, Lumajang, East Java, Indonesia

Corresponding: mauliyasswahyudi@gmail.com

ABSTRACT

Preeclampsia remains a leading cause of maternal and perinatal morbidity and mortality, particularly in low-resource settings where access to early screening tools is limited. Urinary microRNAs (miRNAs), especially hsa-miRNA-1-3p, have emerged as promising biomarkers for preeclampsia due to their stability in maternal urine during the first trimester, weeks before the onset of clinical symptoms, such as elevated blood pressure and proteinuria. Elevated levels of hsa-miRNA-1-3p in maternal urine during the first trimester reflect early abnormal placental blood vessel development and hypoxia associated with preeclampsia. Recent advances in nanotechnology have improved miRNA detection using electrochemical biosensors. The biosensor offers a non-invasive, rapid, low-cost, and portable tool, making it suitable for point-of-care (POC) testing. The incorporation of nanomaterials, such as gold nanoparticles, further enhances the biosensor performance. This study aims to describe the potential of a gold nanoparticle-modified paper-based electrochemical POC biosensor for detecting hsa-miRNA-1-3p in maternal urine as an early antenatal screening tool for preeclampsia in low-resource settings. This systematic review comprehensively searched major databases (PubMed, ScienceDirect, and Google Scholar) for studies published between 2016 and 2026 using PICOS criteria and MeSH terms. The eligible preclinical and translational studies were assessed using JBI critical appraisal tools. Data synthesis adhered to PRISMA 2020 guidelines. A paper-based POC biosensor detects hsa-miRNA-1-3p through probe hybridization and produces a measurable signal. The incorporation of gold nanoparticles increases the biosensor sensitivity by enhancing electrical conductivity, increasing electroactive surface area, and enabling the detection of very low miRNA concentrations. Moreover, gold nanoparticles enhance the biosensor specificity by improving target selectivity and reducing non-specific binding. A gold nanoparticle-modified paper-based electrochemical POC biosensor targeting hsa-miRNA-1-3p in maternal urine has the potential to become a transformative tool for early antenatal screening of preeclampsia in low-resource settings, leading to improved maternal health outcomes.

Keywords: Preeclampsia, Paper-based point-of-care biosensor, Gold-nanoparticles, hsa-miRNA-1-3p, Early preeclampsia screening

The Relationship between Adolescent Pregnancy and Anemia in Pregnancy at Rumah Sakit Idaman Banjarbaru in 2024–2025

Noor Syarifahatati, Budi Zulhardi
Rumah Sakit Daerah Idaman Kota Banjarbaru

ABSTRACT

Background: Anemia in pregnancy remains a global health problem, contributing to increased maternal and neonatal morbidity and mortality. Adolescent pregnancy is considered a significant risk factor due to increased nutritional demands during both growth and pregnancy. This study aimed to analyze the relationship between adolescent pregnancy and anemia in pregnancy at Rumah Sakit Daerah Idaman, Banjarbaru, in 2024–2025.

Methods: This study employed an observational analytic design with a case-control method. The data were obtained from medical records of pregnant women from January 1, 2024, to December 31, 2025. A total of 330 subjects were included, consisting of 165 adolescent pregnant women (<20 years) and 165 adult pregnant women (≥ 20 years). Data were analyzed using the chi-square test with a significance level of 95% ($\alpha = 0.05$).

Findings: The results showed that the proportion of anemia was higher among adolescent pregnant women (69%) compared to adult pregnant women (31%). Statistical analysis revealed a p-value of < 0.001 ($p < 0.05$), indicating a significant relationship between adolescent pregnancy and anemia in pregnancy. These findings suggest that adolescent pregnancy increases vulnerability to anemia, which may be related to nutritional factors and the utilization of healthcare services.

Conclusion: Adolescent pregnancy is significantly associated with an increased risk of anemia. Therefore, efforts to prevent adolescent pregnancy, along with strengthening nutritional education and antenatal care services, are necessary to reduce the risk of anemia among pregnant women.

Keywords: anemia, pregnant women, adolescent pregnancy, reproductive health

Analysis of Obstetric Emergencies Based on Antenatal Care Quality and the Maternal Referral System at Ulin General Hospital: A Mixed-Methods Analysis

Manasye Jutan¹, Renny Aditya²

¹Obstetric and Gynecology Residency Programme -1;

²Obstetric and Gynecology Departement, Obstetrics and Gynecology Social Division
Lambung Mangkurat University – Ulin Hospital - Banjarmasin

Banjarmasin – South Borneo

Correspondence: manasyeboy@gmail.com

Hp. 082219167756

ABSTRACT

Background: Obstetric emergencies remain a leading cause of maternal morbidity and mortality at Ulin General Hospital, a referral center in South Kalimantan. The quality of antenatal care (ANC) and the maternal referral system plays a crucial role in early detection and management of high-risk pregnancies. Evaluating these factors is essential to improve maternal health services.

Methods: This cross-sectional study involved 55 referred pregnant or delivering women. Variables included sociodemographic and obstetric characteristics, ANC history and place, pregnancy risk status, level of obstetric emergency, referral system, and near-miss and mortality outcomes. Data were analyzed descriptively and using Spearman's rank correlation test.

Results: Most women were aged 31–35 years (29.1%), had secondary education (junior high 38.2%; diploma/graduate 32.7%), were housewives (92.7%), and predominantly had high-risk pregnancies (61.8%). Most cases were classified as AGO (43.6%) and APGO (34.5%), with a predominance of timely referrals (RTW 47.3%). Spearman's test showed significant correlations between maternal age and parity (ρ 0.540; $p < 0.001$) and pregnancy risk (ρ 0.387; $p = 0.003$); between ANC frequency and ANC place (ρ 0.355; $p = 0.008$) and pregnancy risk (ρ 0.331; $p = 0.013$); and between maternal education and pregnancy risk (ρ -0.408; $p = 0.002$) and post-CS <18-month cases (ρ 0.308; $p = 0.022$). The level of emergency correlated with referral criteria (ρ 0.270; $p = 0.046$), while referral criteria correlated negatively with near-miss events (ρ -0.487; $p < 0.001$), indicating that better referral patterns are associated with fewer near-miss cases.

Conclusion: ANC quality and an effective maternal referral system are associated with pregnancy risk profiles and the level of obstetric emergency, and may help reduce maternal near-miss and mortality; therefore, strengthening integrated ANC and a tiered referral system remains a priority.

Keywords: obstetric emergency, antenatal care, maternal referral system, high-risk pregnancy, near miss.

Unmet Need pada Multipara: Menggali Akar Psikososial Ketidapatuhan Kontrasepsi dari Sudut Pandang Pasien

Rizky Ika Nahdiah¹, Fajar Akbar Ramadhan²

¹ Dokter Umum Rumah Sakit Harapan Sehat Slawi, Tegal, Jawa Tengah

² Dokter Spesialis Obstetri dan Ginekologi RSUD dr. Soeselo Slawi, Tegal, Jawa Tengah

ABSTRAK

Latar Belakang: Kelompok multipara memiliki risiko klinis tinggi seperti prolaps uteri dan perdarahan pascasalin. Meskipun akses kontrasepsi tersedia, angka unmet need tetap tinggi akibat hambatan non medis. Penelitian ini bertujuan mengeksplorasi akar ketidapatuhan kontrasepsi pada ibu multipara melalui perspektif psikososial dan sistemik.

Kasus: Laporan ini mengevaluasi 4 kasus ibu hamil multipara dengan riwayat kegagalan kontrasepsi. Masalah utama yang ditemukan meliputi: (1) ketakutan terhadap kontrasepsi jangka panjang (IUD) akibat mitos perdarahan, nyeri dan alat terlepas sendiri, (2) rendahnya inisiatif berkonsultasi ke tenaga kesehatan saat mengalami efek samping, di mana pasien lebih memercayai saran rekan sebaya, (3) ketidapatuhan metode jangka pendek (pil/suntik) terutama pada pasangan Long Distance Relationship (LDR), (4) pandangan fatalisme bahwa kehamilan adalah rezeki, tanpa menyadari bahaya multiparitas, serta (5) kurangnya kanal layanan pengaduan pasca pemasangan KB.

Pembahasan: Analisis menunjukkan bahwa unmet need pada responden bukan disebabkan oleh ketiadaan akses, melainkan kegagalan literasi kesehatan dan hambatan komunikasi. Fokus program KB yang terlalu mengejar kuantitas akseptor tanpa menyediakan layanan pengaduan efek samping memicu pasien beralih ke metode yang kurang efektif atau berhenti ber-KB. Pola penggunaan KB pada pasangan LDR dan ketergantungan pada metode user dependent seperti pil meningkatkan risiko kegagalan kontrasepsi pada kelompok ini.

Kesimpulan: Ketidapatuhan KB pada multipara berakar dari akumulasi mitos, fatalisme budaya, dan lemahnya dukungan pasca pemasangan. Diperlukan transformasi konseling yang berfokus pada manajemen efek samping dan edukasi risiko klinis multiparitas guna menurunkan angka unmet need fungsional.

Modern Contraceptive Use in Sexually Active Adolescent Females: What Shapes the Decision?

Hana Faizah Nur Syarifina¹, Nabila Shafa Salsabila², Rheza Firmansyah Muhammad³

¹General Practitioner of RSU Rajawali Citra Bantul,

²General Practitioner of RSUP Dr. Kariadi Semarang,

³General Practitioner of RS Onkologi Solo

Email: hanafaizah7@gmail.com

ABSTRACT

Introduction: Adolescent pregnancy remains a major global public health concern, particularly in low- and middle-income countries. Despite the availability of modern contraceptive methods, utilization among sexually active adolescent females were inadequate. Multiple individual, sociocultural, and relational factors might influence contraceptive decision-making. This systematic review aims to synthesize recent evidence on determinants of modern contraceptive use among sexually active adolescent females aged 10–19 years.

Methods: This systematic review was conducted in accordance with PRISMA guidelines. A comprehensive search was performed in PubMed, Scopus, and Springer for English observational studies published within 2020 and 2025. Eligible studies included cross-sectional, cohort, or case-control designs focusing on factors associated with modern contraceptive use among sexually active adolescent females aged 10–19 years. Studies involving mixed age groups (>19 years), qualitative designs, or systematic reviews were excluded. Three reviewers independently screened titles, abstracts, and full texts. Data were extracted into a summary table and narratively synthesized.

Results: From 444 identified records, eight cross-sectional studies met the criteria. Determinants of modern contraceptive use were categorized into individual, relational, and sociocultural factors. Key factors positively associated with use included older age, higher educational and socioeconomic status, multiparity, and exposure to contraceptive information. Marital status shows associations, with married adolescents sometimes less likely to use contraception. Religious practices and life stressors also affected modern contraceptive decisions. Major barriers included fear of side effects, perceived low pregnancy risk, partner prohibition, religious restrictions, and fertility intentions.

Conclusion: Modern contraceptive use among sexually active adolescent females is shaped by interconnected individual, relational, and sociocultural determinants. Comprehensive interventions addressing education, socioeconomic disparities, partner dynamics, psychosocial support, and access to contraceptive information are essential to improve uptake and reduce unintended adolescent pregnancies.

Keywords: Adolescent females; Modern contraceptive use; Determinants.

Efektivitas Telehealth terhadap Penurunan Kematian Neonatal: Meta-Analisis Pendahuluan

Muhammad Romaneszky Nur'alimy Suryo Bawono¹, Dr. dr. Eugenius Phywai Ganap, Sp. OG(K)²

¹Program Studi Kedokteran Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan
Universitas Gadjah Mada Yogyakarta

²Departemen Obstetri dan Ginekologi Fakultas Kedokteran, Kesehatan Masyarakat, dan
Keperawatan Universitas Gadjah Mada Yogyakarta

Corresponding author: muhammadromaneszkynuralimysuryobawono2005@mail.ugm.ac.id

ABSTRAK

Latar Belakang: Angka Kematian Bayi (AKB) masih menjadi tantangan utama dalam kesehatan anak di Indonesia. Nilai AKB di Indonesia diperkirakan sekitar 15 dari 1000 kelahiran hidup, yang masih jauh dari target Sustainable Development Goals (SDGs) yaitu ≤ 12 per 1000 kelahiran hidup pada tahun 2030. Salah satu pendekatan yang diterapkan untuk meningkatkan pelayanan kesehatan ibu dan anak adalah telehealth, termasuk layanan tele-antenatal care (tele-ANC), yang memungkinkan komunikasi dan pemantauan kehamilan jarak jauh oleh tenaga kesehatan. Penelitian pendahuluan ini dilakukan untuk merangkum hasil beberapa penelitian sebelumnya terkait pengaruh intervensi telehealth dibandingkan layanan konvensional terhadap penurunan AKB. Hasil meta-analisis pendahuluan ini diharapkan memberikan gambaran mengenai efektivitas telehealth dalam meningkatkan kualitas layanan antenatal dan menurunkan AKB.

Tujuan: Menilai efektivitas intervensi telehealth dibanding antenatal konvensional dalam menurunkan kematian neonatal.

Metode: Pencarian literatur dilakukan di database PubMed pada bulan Februari 2026. Penelitian yang diinklusi meliputi uji coba terkontrol seperti randomized controlled trial, quasi-experimental, dan cohort yang membandingkan telehealth dengan layanan konvensional pada ibu hamil dan melaporkan data kematian neonatal. Ekstraksi data dilakukan untuk menghitung risk ratio dengan 95% confidence interval. Untuk mendapatkan risk ratio gabungan, dilakukan analisis pooled menggunakan random-effects model dengan forest plot dan pengukuran heterogenitas I^2 .

Hasil: Dari beberapa penelitian yang diinklusi, tren menunjukkan bahwa telehealth cenderung menurunkan risiko kematian neonatal dibandingkan layanan konvensional. Nilai pooled RR dari 4 penelitian didapatkan sebesar 0.72 (95% CI, 0.58 - 0.89), dengan heterogenitas I^2 sedang (45%). Penemuan ini sesuai dengan beberapa penelitian meta-analisis sebelumnya yang melaporkan efek positif telehealth terhadap luaran ibu dan anak.

Kesimpulan: Analisis pendahuluan menunjukkan bahwa telehealth memiliki potensi untuk menurunkan kematian neonatal, meski dengan data yang terbatas. Hasil ini menekankan pentingnya meta-analisis lengkap dan studi RCT lanjutan untuk memperkuat bukti yang ada.

Kata Kunci: telehealth, pelayanan antenatal, kematian neonatal, meta-analisis

Transformation of Pre-Conception Care: Comprehensive Nutritional Intervention Strategies for Brides-to-be in an Effort to Reduce Maternal Risk at Wonosari II Public Health Center

Azura Nabila Putri¹, Audita Cindy Prawika², Bertylia Purnamasari³, Eugenia Maria Alodia Hartono¹
¹Universitas Gadjah Mada,
²Universitas Kristen Duta Wacana,
³Universitas Muhammadiyah Yogyakarta

ABSTRACT

Background: The transformation of reproductive health services at the primary care level is crucial in reducing the Maternal Mortality Rate (MMR). Chronic Energy Deficiency (CED) during the pre-conception period is one of the risk factors causing pregnancy and childbirth complications. Strengthening early detection through Mid-Upper Arm Circumference (MUAC) measurement serves as a preventive strategy to ensure optimal maternal health quality prior to pregnancy. This study aims to evaluate the effectiveness of comprehensive nutritional intervention strategies in improving the nutritional status of brides-to-be as an effort to mitigate maternal risk at the primary health service level.

Method: This was an observational descriptive study with a cross-sectional approach conducted on 72 brides-to-be at Wonosari II Public Health Center from February to May 2024. The intervention strategy consisted of comprehensive nutritional counseling provided to subjects at risk of CED (MUAC < 23.5 cm). The impact of the intervention was evaluated one month later by comparing MUAC measurements before and after the intervention using Wilcoxon statistical tests.

Result: The prevalence of CED risk among brides-to-be was found to be 25% (18 out of 72 subjects). The characteristics of the at-risk group were dominated by the productive age group (mean age 25 years) with an initial mean MUAC of 21.13 cm. The implementation of the nutritional intervention strategy through integrated counseling showed positive results, with the mean MUAC increasing to 21.3 cm at the following month's monitoring. Statistical analysis showed a p-value=0.034, confirming that the transformation of the service model through nutritional education significantly improved the subjects' nutritional status.

Conclusion: Comprehensive nutritional intervention strategies in pre-conception care are effective in improving the nutritional profile of brides-to-be. This proves that strengthening reproductive health services at the primary level is a strategic step in mitigating maternal risk and enhancing the quality of future generations through upstream malnutrition prevention.

Keyword: Pre-conception Care, Nutritional Intervention, Maternal Risk, Brides-to-be, Chronic Energy Deficiency

MLH1 Expression as a Predictor of Chemosensitivity in Ovarian Cancer: Systematic Review of Clinical Evidence

Safitri Rahmadani¹, Sharvianty Arifuddin¹, Elizabet C. Jusuf¹
Department of Obstetrics and Gynecology, Hasanuddin University
Fax/Phone: 082156810213
Email: safitriahmadanippds@gmail.com

ABSTRACT

Background: Platinum-based chemotherapy remains the cornerstone of treatment for epithelial ovarian cancer, yet resistance frequently develops and limits survival. The DNA mismatch repair (MMR) system, particularly MutL homolog 1 (MLH1), plays a central role in recognizing DNA damage and triggering apoptosis following chemotherapy-induced lesions. Alterations in MLH1 through mutation, promoter hypermethylation, or transcriptional dysregulation may influence chemosensitivity and clinical outcomes.

Methods: A systematic literature search was conducted following PRISMA guidelines across PubMed, ScienceDirect, Cochrane Library, EBSCO, and ProQuest using controlled vocabulary and keywords related to ovarian cancer, MLH1, protein expression, and chemotherapy response. Eligible studies assessed MLH1 using immunohistochemistry, methylation, polymorphism, or transcriptomic analyses and reported treatment response or survival outcomes. Study selection, data extraction, and quality appraisal were performed independently by multiple reviewers. Risk of bias was assessed using RoB 2 for randomized studies and ROBINS-E for non-randomized studies.

Results: Eight clinical studies involving more than 2,200 patients were included. MLH1 status showed dynamic and context-dependent associations with platinum response. Preserved MLH1 expression and intact MMR activity were generally linked with improved survival, while MLH1 silencing, particularly through promoter hypermethylation, was associated with acquired chemoresistance and disease progression. However, heterogeneity in study design and assessment methods produced variable findings across cohorts.

Conclusion: MLH1 represents a biologically relevant and clinically promising biomarker of chemosensitivity in ovarian cancer. Its optimal clinical utility lies in integration with broader DNA damage response and molecular profiling frameworks rather than isolated assessment.

Keywords: Ovarian cancer; MLH1; mismatch repair; chemosensitivity

Analysis of High-Risk Pregnancy on Maternal Referral Decision in Antenatal Care Services at Ulin Regional General Hospital

Jacky Shinto¹, Renny Aditya²

¹Obstetric and Gynecology Residency Programme -1;

²Obstetric and Gynecology Departement, Obstetrics and Gynecology Social Division
Lambung Mangkurat University – Ulin Hospital - Banjarmasin

Banjarmasin – South Borneo

Correspondence: ngjacky14@gmail.com

Hp. 082276335577

ABSTRACT

Background: High-Risk Pregnancy (HRP) remains a major contributor to maternal morbidity and mortality, making timely and appropriate referral decisions during Antenatal Care (ANC) essential to prevent complications. Ulin Regional General Hospital is a central referral and teaching hospital where most admitted pregnant women present with multiple obstetric risk factors and varying degrees of emergency, thus requiring an analysis of the relationship between HRP and the maternal referral system.

Methods: This analytical observational study used a cross-sectional design involving 55 referred pregnant women. Data were collected from medical records and observation forms, including high-risk pregnancy characteristics, sociodemographic factors, ANC history, pregnancy risk status, level of obstetric emergency, referral criteria, near miss events, and maternal outcomes. Data were analyzed descriptively, preceded by normality and homogeneity tests, followed by Spearman correlation to assess relationships between variables with a significance level of $p < 0.05$.

Results: Most mothers were aged 21–35 years, with the largest group being 31–35 years (29.1%), had predominantly secondary education (junior high school 38.2%; diploma/undergraduate 32.7%), and were housewives (92.7%). Most husbands were 26–30 years old (34.5%), had senior high school education (60.0%), and worked in the private sector (76.4%). The most common parity was 2 (32.7%), and most mothers attended ANC 4–6 times (43.6%), mainly at a combination of midwife practice and obstetrician (47.3%). High-risk pregnancy status accounted for 61.8% of cases, with the most frequent emergency level being “existing obstetric emergency” (43.6%), and most referrals categorized as timely (47.3%). Spearman analysis showed significant correlations between maternal age and parity ($\rho = 0.540$; $p < 0.001$) and pregnancy status ($\rho = 0.387$; $p = 0.003$), between ANC history and ANC place ($\rho = 0.355$; $p = 0.008$) and pregnancy status ($\rho = 0.331$; $p = 0.013$), and between maternal education and pregnancy status ($\rho = -0.408$; $p = 0.002$) and post–cesarean section <18 months cases ($\rho = 0.308$; $p = 0.022$). There was also a significant association between level of emergency and referral criteria ($\rho = 0.270$; $p = 0.046$) and a moderate negative correlation between referral criteria and near miss ($\rho = -0.487$; $p < 0.001$), indicating that better referral quality is associated with fewer near miss events.

Conclusion: High-risk pregnancy status and maternal sociodemographic factors play an important role in ANC utilization patterns and maternal referral decisions, while timely and good-quality referrals are associated with lower near miss events and better maternal outcomes. Strengthening risk screening at the primary care level, optimizing ANC services, and improving the tiered referral system are necessary to reduce maternal complications and mortality.

Keywords: high-risk pregnancy, antenatal care, maternal referral, obstetric emergency, near miss.

Bacterial Vaginosis as a Risk Factor for Preterm Premature Rupture of Membranes: A Meta-Analysis

Cecilia Putri Tedyanto^{1*}, Norika Fairuza Irbach¹

¹Department of Obstetrics and Gynecology, Universitas Airlangga Hospital, Surabaya, Indonesia

ABSTRACT

Background: Preterm premature rupture of membranes (PPROM) is a major cause of adverse pregnancy outcomes. Genital tract infection has been identified as a potential risk factor for PPRM. Bacterial vaginosis (BV) is one of the most common forms of vaginitis, characterized by the overgrowth of pathogenic bacteria, typically by *Gardnerella vaginalis*, at the expense of the normal flora.

Objective: This meta-analysis aimed to evaluate the potential association between BV and PPRM and to highlight the importance of education regarding genital hygiene.

Methods: The protocols were registered in PROSPERO (registration number CRD420261356727) and performed in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses guideline. PubMed, Scopus, and Web of Science were systematically searched from their inception to March 2026 for studies evaluating the risk of PPRM in BV patients. The Newcastle-Ottawa quality assessment scale was performed. Odds ratios (ORs) and 95% confidence intervals (CIs) from studies were meta-analyzed using fixed-effect models.

Results: A total of five studies involving 3927 patients (768 PPRM cases and 3159 controls) were included. Three studies were categorized as high quality and two as moderate quality. The pooled OR revealed that BV increases the risk of PPRM by 1.67 times in pregnant women (OR 1.67, 95% CI 1.14 to 2.46, P=0.009, I²=61%).

Discussion: PPRM was defined as prelabour rupture of membranes at below 37 weeks of gestation. A greater risk of maternal and neonatal infections, fetal distress, and preterm birth in PPRM heavily contributed to the high mortality rates of the maternal (MMR) and neonatal (NMR). BV causes PPRM by triggering a local inflammatory response by producing IL-1 β , IL-6, IL-8, and TNF- α . These cytokines enhance matrix metalloproteinase-9, a zinc-dependent enzyme that degrades collagen in the fetal amniotic membrane, leading to rupture.

Conclusion: BV was an independent risk factor associated with PPRM. Eradicating BV through appropriate treatment and primary prevention through informative education are effective strategies for the Obstetrician-Gynecologist to reduce the incidence of PPRM, as well as MMR and NMR.

Keywords: Bacterial vaginosis, *Gardnerella vaginalis*, genital tract infection, preterm premature rupture of membranes, PPRM

Suspected of Complex Lethal Osteochondrodysplasia Resulting in Recurrent Pregnancy Loss: A Case Report

¹dr. Cinthia Dewi Lukito, ²Dr. dr. Hartati, Sp.O.G, Subsp. Obginsos, M.Kes
Universitas Sriwijaya

Jl. Dr Muhammad Ali, Sekip jaya, Kec. Kemuning, Kota Palembang, Sumatera Selatan 30114
¹cinthiadewilukito06@gmail.com, ²drhartatispog@gmail.com

ABSTRACT

Introduction: Recurrent pregnancy loss is defined as two or more consecutive pregnancy loss.[1] Etiology of recurrent pregnancy loss genetic factor.[2] In this case report we present a suspected case of complex lethal osteochondrodysplasia.

Case Summary: Female, 38 years old, 10 weeks G8P2A5 presented to our outpatient clinic for routine evaluation. Patient is known to own poor obstetric history in addition to history of whitish smelly discharge. Patient suffered from preeclampsia in prior pregnancies. History of previous pregnancies revealed history of multiple abortions at 12 weeks and history of preterm deliveries at 24 and 28 weeks. Pedigree evaluation revealed no obvious dominant genetic inheritance pattern. Upon ultrasonography, we discovered live singleton pregnancy with neck hygroma, absent nasal bone, placentomegaly, cardiomegaly, hydrothorax, and ventricular septal defect. Examination of the ultrasound records in previous pregnancies also revealed similar findings, increasing suspicion of genetic involvement. Patient was subsequently treated for hypertension in pregnancy (180/120 mmHg) with nifedipine and vitamin D.

Discussion: Due to normal parental features, we suspected recessive genetic disorder. Searches in PubCaseFinder [3] revealed high probability of complex lethal osteochondrodysplasia (OMIM 616897). This condition is a result of TAPT1 mutation, highly conserved gene regulating ciliogenesis. TAPT1 mutation results in abnormal cellular migration resulting in widespread organogenesis defect due to its role in the formation of Golgi apparatus and collagen synthesis.[4] Mutation in TAPT1 may result in impaired regulation of SFRP1, gene regulating canonic Wnt pathway.[5] The case of complex lethal osteochondrodysplasia is invariably lethal, with death occurring in utero or immediately after birth and thus palliative care should be offered in case of delivery occurring at 20 weeks of pregnancy or more.[6]

Conclusion: Recurrent pregnancy loss warrants further investigation of possibility of genetic syndrome.

Keywords: TAPT1; complex lethal osteochondrodysplasia; ciliogenesis

Adolescent Pregnancy in Social Vulnerability: Integrating Reproductive Health and Local Wisdom to Reduce Severe Maternal Morbidity

Lusiani Puspita¹, Khanisyah Erza², Eccita Rahestiningtyas³

¹Department of Obstetrics and Gynecology, Dr. Soetomo General Academic Hospital, Surabaya, Indonesia

²Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

ABSTRACT

Background: Adolescent pregnancy is a high-risk reproductive health issue contributing to maternal and infant mortality and the double burden of malnutrition. Social determinants such as sexual violence, stigma, and limited access to care significantly worsen maternal outcomes. A social obstetrics approach integrating local wisdom is needed to bridge clinical care and community context.

Case: A 14-year-old primigravida, a survivor of sexual violence, presented with anaemia and obesity. She underwent caesarean section due to secondary arrest with malpresentation, followed by severe complications including endometritis, intra-abdominal abscess, wound dehiscence, and ultimately required repeated laparotomies and total abdominal hysterectomy. The condition was exacerbated by psychological disorders and limited social support.

Discussion: This case highlights the complex interaction between social determinants, clinical factors, and healthcare systems. Lack of community-based and culturally grounded interventions contributed to delayed detection and management. Integrating reproductive health services with sociocultural approaches, such as community education, culturally sensitive referral systems, and psychosocial support, is critical to reducing complications and mortality.

Conclusion: An integrated social obstetrics approach combining clinical care and local wisdom is essential to reduce severe maternal morbidity and contribute to lowering maternal and infant mortality and the double burden.

Keywords: Adolescent pregnancy, social obstetrics, local wisdom, maternal morbidity, reproductive health

Multifactorial Eclampsia in Nulliparous Women: A Case Report

Nanda Putra Prakasa¹, Bahari Al Barru², Budi Wicaksono³

¹General Practitioner, Sumekar Hospital Sumenep Jawa Timur Indonesia

²Departemen of Obstetrics and Gynecology, Rumkitalmar Ewa Pangalila Surabaya Jawa Timur Indonesia

³Departemen of Obstetrics and Gynecology, Fetomaternal Division, Dr. Soetomo Hospital Surabaya Jawa Timur Indonesia

ABSTRACT

Preeclampsia and eclampsia one of causes of maternal mortality in Indonesia, after bleeding and infection. The maternal mortality rate due to preeclampsia and eclampsia in Indonesia is high, around 9.8% to 25%. There are several risk factors for preeclampsia or eclampsia primigravida or nullipara, maternal age ≥ 40 years, BMI ≥ 35 kg/m², multifetal pregnancy and interval pregnancies of more than 10 years. Manifestation clinical of eclampsia is seizures in pregnant women. This is a case report, a woman initials Mrs. SA, a nulliparous pregnant at 39-40 weeks gestation, 22 years old, with chief complain headaches since last night, and blurred vision since this morning. While in the emergency room, the patient was seizures. On examination, blood pressure was 196/132mmHg, pulse rate 116x/minute, her height is 155cm weight 76kg before pregnant and pregnancy weight 85kg, BMI 35.41kg/m². urine examinations showed proteinuria +3. The patient only had two times ANC examinations. Nulliparous have a 1.95 times greater risk of suffering from preeclampsia compared to multigravida. The process of preeclampsia and eclampsia in nulliparous is a disruption in the immunological mechanism of blocking antibody formation carried out by HLA-G (Human Leukocyte Antigen G) against placental antigens that have not been fully formed, so that the process of trophoblast implantation into the mother's decidual tissue is disrupted. In pregnant women with obesity, the risk of suffering from nulliparous is 13.3%. Nulliparous can occur with mechanisms of hyperleptinemia, inflammatory reactions, and increased oxidative stress, leading to endothelial damage and dysfunction. A lack of maternal knowledge about nulliparous pregnancy is a significant contributing factor. The Conclusion, pregnant women should receive preconception counseling to help both individuals and couples assess risks, optimize medical care, and prevent adverse events for both mother and baby during pregnancy.

Keywords: eclampsia, nulliparous, obesity

Associated Between Prenatal Fluoride Exposure and Birth Outcomes: A Global Systematic Review

Agfi Bifadhlika Prasetya¹, Ghufran Jabbar Maulana¹, Fakhri Madhat Zaidan¹, Sabrina Hiranandani¹
¹Faculty of Medicine, Universitas Padjadjaran

ABSTRACT

Introduction: Exposure to fluoride during gestation has been associated with adverse birth outcomes, but current findings are notably sparse. This systematic review comprehensively evaluates associations between prenatal fluoride exposure and diverse birth outcomes, including birth weight, size of gestational age, and gestational age.

Methods: A systematic literature search was performed in PubMed, Scopus, and EBSCO Host up to March 28, 2026, to identify studies examining the association between prenatal fluoride exposure and birth outcomes. Risk of bias was assessed using ROBINS-I. Findings will be integrated through a narrative synthesis to provide a comprehensive overview of the impact of prenatal fluoride exposure on birth outcomes.

Results & Discussion: A total of 8 studies were included. Findings varied significantly by exposure measure. For maternal urinary fluoride, results were conflicting as studies reported either no association, a slight negative linear trend with birth weight, or non-linear trimester-specific effects. For community water fluoridation, while some studies found no associations, others reported a non-linear trend where moderate exposure of 0.3 to 0.6 mg/L modestly increased birth weight and gestational age. Conversely, excessive levels above 0.6 to 1.0 ppm elevated risks of macrosomia, small for gestational age, and low birth weight, particularly in vulnerable demographics. Maternal fluoride intake from beverages showed no association with adverse outcomes. Furthermore, chronic exposure markers, specifically maternal dental fluorosis, consistently correlated with an increased risk of low birth weight.

Conclusion: The impact of prenatal fluoride on birth outcomes is conflicting and highly exposure-dependent. Future research must prioritize standardized, dose-specific evaluations to address these inconsistencies.

Keywords: Pregnant women; Prenatal; Fluoride; Birth Outcome;

Early Marriage and Maternal–Child Health Outcomes in East Java: A Multi-Year Ecological Analysis (2019–2023)

Peter Asa¹, Ilham Rahmanto¹, Wafirotus Sariroh^{1,2}, Akhsananta Lian Ferdiansyah^{1,2}, Azkia Rachmah^{2,3}, Budi Prasetyo⁴

¹Faculty of Medicine, Universitas Airlangga, Surabaya, East Java, Indonesia

²Sumberrejo General Public Hospital, Bojonegoro, East Java, Indonesia

³Faculty of Medicine, Universitas Sebelas Maret, Surakarta, Central Java, Indonesia

⁴Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Airlangga, Surabaya, East Java, Indonesia

ABSTRACT

Background: Early marriage has been linked to adverse maternal and child health outcomes and remains a major public health challenge in Indonesia. However, population-level evidence examining how socio-economic determinants interact with early marriage and downstream health outcomes remains limited. This study aimed to evaluate the association between socio-economic factors, early marriage, and maternal–child health outcomes in East Java using multi-year ecological data.

Methods: An ecological study was conducted using aggregated data from 38 districts/cities in East Java (2019–2023), obtained from the Central Bureau of Statistics of East Java (BPS East Java) and the East Java Provincial Health Profile. Independent variables included poverty rate, proportion of women with low educational attainment, and Gender Inequality Index. Early marriage (<17 years) was treated as a mediating variable. Outcomes included maternal mortality (absolute number and maternal mortality ratio), infant mortality (absolute number and infant mortality rate), low birth weight (LBW), and stunting prevalence. Data were analyzed using a bivariate correlation test in SPSS.

Results: Low educational attainment among women showed the strongest and most consistent correlation with early marriage ($p < 0.001$, $r = 0.698–0.757$), followed by gender inequality and poverty ($p < 0.01$). Early marriage was significantly associated with higher maternal mortality ($p < 0.05$, $r = 0.380–0.459$), maternal mortality ratio ($p < 0.001$, $r = 0.254–0.556$), and infant mortality ($p < 0.05$, $r = 0.380–0.478$). A significant Association ($p < 0.05$) with infant mortality rate emerged in later years (2022–2023). However, early marriage was not significantly associated with LBW or stunting across the study period.

Conclusion: Early marriage is strongly associated with socio-economic inequalities and increased maternal and infant mortality at the population level in East Java. Addressing educational disparities and gender inequality may play a critical role in reducing early marriage and improving maternal–child health outcomes.

Keywords: Early Marriage, Ecological Study, Infant Mortality, Maternal Mortality, Socioeconomic Factors

Maternal RSV Vaccination during Pregnancy: Evidence from Low- and Middle-Income Countries – A Systematic Review

J.M. Seno Adjie¹, Gita Sirini Candijaya¹, Khozain Rohmat Robby¹

¹Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Indonesia
Dr. Cipto Mangunkusumo General Hospital, Jakarta

ABSTRACT

Introduction: Maternal Respiratory Syncytial Virus (RSV) vaccination during pregnancy shows potential to reduce RSV burden in low- and middle-income countries (LMICs), supporting efforts to lower Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) and strengthen integrated maternal–child health strategies.

Method: This systematic review followed PRISMA guidelines using PICOS criteria. Population included pregnant women receiving RSV vaccination (RCTs and cohort studies; exclusions: case reports, reviews, abstracts only). Intervention was maternal RSV vaccination, compared with unvaccinated pregnant women. Primary outcomes were safety and efficacy; secondary outcomes included RSV-associated lower respiratory tract illness (LRTI), severe RSV-LRTI, hospitalizations, and preterm birth. Searches across ProQuest, EBSCO, PubMed, and BMC (2021–2026) identified 7,065 records; 330 full texts were screened, and 10 studies were included.

Results and Discussion: Ten studies from LMICs demonstrated that maternal RSV vaccination is safe, with mostly mild local/systemic reactions (<10%), and effective, reducing severe RSV-LRTI and infant hospitalizations (<6 months) by 75–85% (RR 0.15–0.25). These findings are consistent with major global trials and are particularly relevant in LMIC settings where RSV contributes substantially to neonatal morbidity. Integration into antenatal care platforms enhances feasibility and coverage, supporting broader maternal–child health strategies. The intervention contributes to reducing infant morbidity and may indirectly support maternal health through prevention of infection and preterm birth. However, heterogeneity in study designs (RCTs and observational cohorts) and limited follow-up beyond six months remain key limitations. Although publication bias appears minimal, longer-term safety, effectiveness, and cost-effectiveness data are still needed, particularly for real-world implementation in diverse LMIC settings.

Conclusion: Maternal RSV vaccination is a safe and effective intervention in LMICs, with substantial potential to reduce infant morbidity and strengthen maternal–child health systems. Integration into national immunization programs is recommended.

Keywords: RSV vaccine, pregnancy, low middle income countries, MMR, IMR

The Three Delays Model in Obstetric Hemorrhage: A Case of Suspected Placental Abruption with Severe Preeclampsia and Anemia

Fandrianum Sekardiasti¹, Pom Harry Satria²

¹Obstetric and Gynecology Specialist Education Program, Faculty of Medicine Andalas University, Padang, West Sumatra, Indonesia

²Sungai Dareh Hospital, Dharmasraya, West Sumatra, Indonesia

ABSTRACT

INTRODUCTION: Obstetric bleeding continues to be one of the primary contributors to maternal and perinatal deaths globally. Placental abruption, especially when associated with preeclampsia and maternal anemia, significantly increases the risk of poor outcomes. From a social obstetrics perspective, preventable morbidity and mortality are often linked to delays in identifying complications, delays in decision-making, and delays in obtaining adequate medical care, collectively described as the “three delays” model.

CASE: A 37-year-old woman (G5P4A0L3) at 36–37 weeks of gestation was referred with a diagnosis of suspected placental abruption accompanied by severe preeclampsia. At the initial evaluation in a primary care clinic, she presented with markedly elevated blood pressure (210/140 mmHg), headache, and abdominal discomfort. While being transferred, she developed profuse vaginal bleeding. On arrival, the patient remained hemodynamically compromised with ongoing hemorrhage, decreased fetal movements, severe anemia (hemoglobin 6.2 g/dL), oligohydramnios, and suspected intrauterine growth restriction. Emergency management consisted of intravenous fluid resuscitation, continuation of magnesium sulfate therapy, blood transfusion preparation, and immediate hysterectomy. A male neonate was delivered with low birth weight, low Apgar scores, and features consistent with early maceration.

DISCUSSION: This case highlights the multifactorial interaction between severe preeclampsia, significant anemia, and health system limitations leading to placental abruption and hemorrhagic shock. Delays in symptom recognition, referral, and definitive management reflect the “three delays” model and contributed to disease progression. Improving early detection of high-risk pregnancies, strengthening referral systems, and enhancing maternal education are essential to prevent similar adverse outcomes.

CONCLUSION: Obstetric bleeding resulting from placental abruption in high-risk pregnancies is influenced by clinical and social factors. Addressing the three delays through better access, timely referral, and improved antenatal care are essential to reduce maternal and perinatal mortality.

Keywords: placental abruption, severe preeclampsia, anemia, three delays, maternal mortality

Social Determinants of Adolescent Pregnancy in Low- and Middle-Income Countries: A Systematic Review

JM Seno Adjie¹, Khozain Rohmat Robby¹, Gita Sirini Candijaya¹
Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Indonesia
Dr. Cipto Mangunkusumo General Hospital, Jakarta

ABSTRACT

Background: Adolescent pregnancy remains a major global public health issue, particularly in low- and middle-income countries (LMICs). It contributes to increased maternal and neonatal morbidity and mortality, as well as adverse social and economic outcomes. Social determinants such as low educational attainment, poverty, early marriage, and limited access to contraception play a critical role. However, existing evidence remains fragmented, highlighting the need for a comprehensive synthesis.

Methods: This systematic review followed PRISMA guidelines. Literature was searched in PubMed, Scopus, and ScienceDirect using keywords, Boolean operators, and MeSH terms. Observational studies (cross-sectional, cohort, case-control) published between 2015 and 2025, involving adolescents aged 10–19 years in LMICs, and reporting measures such as odds ratios (OR) or relative risks (RR) were included. Data were extracted and synthesized narratively.

Results: A total of 15 studies were included. Adolescent pregnancy was consistently associated with low education and socioeconomic disadvantage, with higher education showing a strong protective effect (OR up to 0.19) and the lowest socioeconomic groups demonstrating increased risk (OR up to 6.24). Limited sexual and reproductive health knowledge significantly increased risk (PR up to 2.15), while early sexual initiation and child marriage were key contributing factors. Contextual factors, including social and gender inequalities, also influenced outcomes.

Conclusion: Adolescent pregnancy in LMICs is driven by complex and interrelated social determinants. Multilevel interventions targeting both individual and structural factors are essential to reduce its burden and associated inequalities.

Keywords: Adolescent pregnancy, social determinants, LMICs, socioeconomic factors, adolescents.

Analisis Faktor Determinan yang Mempengaruhi Kunjungan Antenatal Care (ANC) di Indonesia: Tinjauan Sistematis

Ronaldo Nicolas Nathaniel Situmorang¹, Helen Debora Br. Napitupulu²

¹Abepura General Hospital, Jayapura Papua.

²dr. H. Ishak Umarella General Hospital, Tulehu Maluku

Korespondensi Penulis:

Ronaldo Nicolas Nathaniel Situmorang, Jayapura, Papua 0813 6050 0414 /
ronaldonicolasss@gmail.com

ABSTRAK

Pendahuluan: Angka kematian maternal di negara berkembang masih 15 kali lebih tinggi dibandingkan negara maju, dengan rendahnya cakupan antenatal care (ANC) sebagai faktor risiko utama yang dapat dicegah. Berbagai determinan personal (usia, pendidikan, pengetahuan, pekerjaan) dan sosial (dukungan keluarga, aksesibilitas) memengaruhi kepatuhan kunjungan ANC. Tinjauan sistematis ini bertujuan mengidentifikasi dan mensintesis faktor-faktor determinan yang memengaruhi kunjungan ANC pada ibu hamil di Indonesia.

Metode: Penelitian ini mengikuti pedoman PRISMA. Pencarian sistematis dilakukan pada pangkalan data PubMed dan Google Scholar untuk artikel yang diterbitkan antara tahun 2020–2026. Kriteria inklusi mencakup studi kuantitatif yang dilakukan di Indonesia dengan minimal dua variabel determinan. Dari 8.630 catatan yang diidentifikasi, sebanyak 6 studi memenuhi kriteria kelayakan untuk dianalisis secara kualitatif.

Hasil: Dari 8.630 pencarian awal (PubMed n=2.399; Google Scholar n=6.231), setelah penghapusan duplikat dan penyaringan, hanya 6 studi cross-sectional yang memenuhi kriteria inklusi (total sampel 43–117 ibu hamil, lokasi: Bogor, Boalemo, Tapanuli Selatan, Empat Lawang, Manggarai, Jakarta Timur; tahun 2020–2025). Faktor personal yang paling konsisten berhubungan signifikan adalah tingkat pendidikan (5 studi, p=0,001–0,027) dan pengetahuan ibu (4 studi, p<0,05). Usia dan pekerjaan menunjukkan hubungan inkonsisten. Faktor eksternal dan sosial yang paling kuat adalah jarak tempat tinggal (3 studi, p=0,000–0,033), dukungan suami (3 studi, p=0,000–0,017), dan dukungan keluarga (3 studi, p=0,000–0,004). Dukungan tenaga kesehatan tidak signifikan.

Kesimpulan: Kunjungan ANC di Indonesia secara konsisten dipengaruhi oleh pendidikan, pengetahuan ibu, dukungan suami/keluarga, serta aksesibilitas fisik dan status sosial ekonomi. Usia dan pekerjaan bersifat inkonsisten. Diperlukan penelitian yang lebih mendalam dan uji intervensi berbasis komunitas untuk menghasilkan bukti kausal yang lebih kuat guna mendukung kebijakan kesehatan maternal nasional.

Keywords: Antenatal Care, Kunjungan ANC, Determinan Sosial Ekonomi, Pengetahuan Ibu Hamil, Dukungan Keluarga, Tinjauan Sistematis

Breaking the Cycle of Maternal Mortality: The Protective Role of Vitamin D in Preventing Preeclampsia - A Systematic Review of Randomized Controlled Trials

Chintia Dyah Ayuning Putri¹, Agung Wahyu Hidayat²

¹Faculty of Medicine and Health Sciences, Muhammadiyah University of Yogyakarta.

²Department of Internal Medicine, Faculty of Medicine, Universitas Sebelas Maret, Dr. Moewardi General Hospital Surakarta.

Correspondence: Chintia Dyah Ayuning Putri, Phone: 085707457985,
Email: chintiadap96@gmail.com

ABSTRACT

Background: Preeclampsia affects 2–8% of pregnancies worldwide and remains a major contributor to maternal and perinatal morbidity and mortality. Vitamin D has been implicated in placentation, immune modulation, and endothelial regulation key mechanisms in preeclampsia pathogenesis. However, previous studies evaluating vitamin D supplementation during pregnancy have shown varied results.

Objective: To qualitatively synthesize contemporary randomized controlled trials (2015–2025) assessing the effect of vitamin D supplementation during pregnancy on the incidence of preeclampsia.

Methods: A systematic review was conducted following PRISMA guidelines. Randomized controlled trials published between January 2015 and December 2025 were included if they evaluated oral vitamin D supplementation in pregnant women and reported preeclampsia as a primary or secondary outcome. Data were extracted on study population, dosage regimen, comparator, and preeclampsia incidence. Risk of bias was assessed using the Cochrane RoB 2 tool. Due to substantial heterogeneity in dosing, timing, baseline vitamin D status, and population risk profiles, a qualitative synthesis was performed.

Results: Eleven randomized controlled trials involving over 3,700 pregnant women were included. Nine trials reported a reduction in preeclampsia incidence in the intervention group, with eight demonstrating statistical significance. Protective effects were more consistently observed in studies employing higher-dose regimens (≥ 4000 IU/day or equivalent intermittent dosing) and in high-risk or vitamin D-deficient populations. In contrast, trials conducted in general obstetric populations using moderate doses (≤ 1000 IU/day) showed largely neutral findings.

Conclusion: Vitamin D supplementation during pregnancy appears to reduce the risk of preeclampsia, particularly in high-risk or vitamin D-deficient women and when administered at higher doses. A targeted, early, and adequately dosed supplementation strategy may represent a rational approach to preeclampsia prevention.

Keywords: Vitamin D; Preeclampsia; Pregnancy

Hubungan Tingkat Pendidikan dengan Penggunaan Intra Uterine Device (Iud) Paska Plasenta pada Ibu Bersalin di Rumah Sakit Ibu dan Anak Kuncup Bunga Lombok Timur Tahun 2025

Suaidi, Desy Erina Arianti, I Wayan Agung Indrawan

PPDS-2 Obstetri dan Ginekologi Fakultas Kedokteran Universitas Brawijaya Malang, PPDS-2 Obstetri dan Ginekologi Fakultas Kedokteran Universitas Brawijaya Malang/ Rumah Sakit Umum Daerah Dr. Saiful Anwar Malang, Rumah Sakit Ibu dan Anak Kuncup Bunga Lombok Timur

ABSTRAK

Latar Belakang: Penggunaan intra uterine device (IUD) paska plasenta merupakan metode kontrasepsi jangka panjang yang efektif, namun penggunaannya masih rendah. Tingkat pendidikan diduga berhubungan dengan kemampuan ibu dalam memahami informasi dan mengambil keputusan terkait penggunaan IUD paska plasenta.

Metode: Penelitian ini menggunakan desain analitik korelasional dengan pendekatan cross sectional. Penelitian dilakukan di Rumah Sakit Ibu dan Anak (RSIA) Kuncup Bunga Lombok Timur pada periode Januari–Desember 2025. Populasi dan sampel penelitian adalah seluruh ibu bersalin di RSIA Kuncup Bunga Lombok Timur sebanyak 4.154 responden. Variabel bebas adalah tingkat pendidikan, sedangkan variabel terikat adalah penggunaan IUD paska plasenta. Analisis hubungan dilakukan menggunakan uji chi-square.

Hasil Diskusi: Sebagian besar responden memiliki tingkat pendidikan SMA, yaitu 2.221 orang (53,5%). Penggunaan IUD paska plasenta ditemukan pada 124 responden (3,0%), sedangkan 4.030 responden (97,0%) tidak menggunakan IUD paska plasenta. Persentase penggunaan IUD paska plasenta tertinggi ditemukan pada kelompok pendidikan S2 sebesar 13,3%, sedangkan kelompok D1, D2, dan D4 tidak menunjukkan penggunaan. Pada kelompok dengan jumlah responden terbesar, persentase penggunaan tertinggi ditemukan pada pendidikan SD sebesar 6,9%. Hasil uji chi-square menunjukkan nilai Pearson Chi-Square sebesar 42,112 dengan $p=0,000$, sehingga terdapat hubungan yang bermakna antara tingkat pendidikan dan penggunaan IUD paska plasenta. Pola hubungan yang ditemukan tidak sepenuhnya linear karena beberapa kelompok pendidikan rendah juga menunjukkan proporsi penggunaan yang relatif tinggi.

Kesimpulan: Terdapat hubungan yang bermakna antara tingkat pendidikan dan penggunaan IUD paska plasenta pada ibu bersalin di RSIA Kuncup Bunga Lombok Timur, meskipun hubungan tersebut tampak dipengaruhi oleh variasi karakteristik pada masing-masing tingkat pendidikan.

Kata kunci: ibu bersalin, IUD paska plasenta, kontrasepsi paskapersalinan, Tingkat pendidikan.

Infant Mortality Rate 0 - 11 Months at Aek Kanopan Regional General Hospital in 2025

Melva Heidy Ananda, Indriani Pratiwi
Faculty of Medicine University of North Sumatera

ABSTRACT

Background: The Infant Mortality Rate (IMR) is a measure of the number of infant deaths in the first year of life per 1,000 live births. IMR includes deaths during the neonatal period (between 0 - 28 days) and postneonatal period (between 28 days - 1 year). The IMR in Indonesia in 2022 was approximately 23.5 deaths per 1,000 live births. Although this figure has decreased from the previous ten years, significant efforts are still needed to achieve the SDG target of 12 deaths per 1,000 live births by 2030. In Indonesia, the causes of infant mortality can be divided into several main factors, including health, social and economic factors. Therefore, the role of hospitals is crucial in addressing maternal and infant health issues, particularly in reducing infant mortality.

Method: This was a descriptive study using a retrospective approach to medical records of infant patients.

Discussion: Results showed that there were 5 infant deaths per visit. The characteristics of the infants who died included birth weights between 1,000 - 2,800 grams, ages 0 - 4 days and the majority were male (60%). The predominant cause of death was congenital abnormalities (80%), low birth weight (20%), with ideal maternal age (80%) and abdominal delivery (60%). The infant mortality rate at Aek Kanopan Regional General Hospital during this period was 5 per 1,000 live births.

Conclusion: Aek Kanopan Regional General Hospital recorded an infant mortality rate of 5 per 1,000 live births, predominantly among infants with congenital abnormalities, with the highest mortality occurring 0 – 4 days.

Keywords: Infant Mortality Rate, Infant Mortality, Reduce Infant Mortality.

Adolescent Pregnancy and Risk of Neonatal Mortality: A Systematic Review and Meta-Analysis

Muhammad Dhafin Fadhl¹, Zulkifi Ahmad²

¹Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

²Department of Obstetrics and Gynecology Sub Divisi fertility and reproductive and endocrinology, Faculty of Medicine, Universitas Swadaya Gunung Jati, Cirebon, Indonesia

ABSTRACT

Introduction: Adolescent pregnancy remains a major global public health concern, particularly in low- and middle-income countries. Biological immaturity, inadequate maternal nutrition, and limited access to antenatal care among adolescent mothers may increase the risk of adverse neonatal outcomes. Infants born to adolescent mothers are more vulnerable to complications such as Low Birth Weight and may require specialized care in the Neonatal Intensive Care Unit. These complications may ultimately contribute to an increased risk of Neonatal Death. However, previous studies have reported inconsistent findings regarding the association between adolescent pregnancy and neonatal outcomes. Therefore, this study aimed to evaluate the impact of adolescent pregnancy on adverse neonatal outcomes through a systematic review and meta-analysis.

Method: A Study selection followed the PRISMA Statement 2020 guidelines. A PubMed search identified 3,125 records. After removing duplicates ($n = 8$), 3,117 records were screened and 150 full-text articles were assessed for eligibility. A total of 11 studies met the inclusion criteria and were included in the systematic review. Separate random-effects meta-analyses were performed for each outcome, reporting pooled odds ratios (ORs) with 95% confidence intervals (CIs). Only studies reporting the specific outcome were included in the corresponding meta-analysis; therefore, the number of studies analyzed varied across outcomes. Between-study heterogeneity was assessed using the I^2 statistic.

Results: The pooled analysis showed that adolescent pregnancy was associated with a more than fivefold increased risk of Neonatal Death (OR = 5.18; 95% CI: 1.68–15.99; $p = 0.004$). Infants born to adolescent mothers also demonstrated higher risks of Low Birth Weight (OR = 1.28; 95% CI: 0.88–1.86; $p = 0.20$) and admission to the Neonatal Intensive Care Unit (OR = 1.38; 95% CI: 0.81–2.34; $p = 0.24$), although these associations were not statistically significant. Substantial heterogeneity was observed across the included studies.

Conclusion: Adolescent pregnancy is associated with a significantly increased risk of neonatal mortality. Although the associations with low birth weight and NICU admission were not statistically significant, both outcomes showed a tendency toward increased risk. Strengthening reproductive health education and improving maternal health services may help reduce adverse neonatal outcomes among adolescent mothers.

Keywords: Adolescent pregnancy, Neonatal death, Low birth Weight, NICU admission

Effectiveness of Culturally Adapted Digital Maternal Health Interventions Integrated with Local Wisdom and Community Based in Improving Maternal and Neonatal Outcomes: A Systematic Review (2021–2025)

Nabila Divandra Kusuma¹, Michelle Grady Evangelli¹, Arsyia Auliya¹, Hanifa Erlin Dharmayanti^{1,2}

¹Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

²Rumah Sakit Umum Daerah Dr. Soetomo, Surabaya, Indonesia

ABSTRACT

Background: Maternal and neonatal mortality remain significant global health challenges, particularly in resource limited settings. Digital maternal health interventions have emerged as innovative solutions. However, their effectiveness is enhanced when integrated with local wisdom and community-based approaches that address sociocultural contexts.

Objectives: This systematic review aimed to assess the effectiveness of culturally adapted digital maternal health interventions integrated with local wisdom and community-based strategies in improving maternal and neonatal outcomes from 2021 to 2025.

Methods: A systematic review of 10 studies was conducted following PRISMA guidelines, including randomized controlled trials, cluster randomized trials, quasi-experimental, and mixed methods studies published in 2021-2025. A total of 1.806 records were found, of which 1,794 were excluded after screening, resulting in 10 studies that met the inclusion criteria. Data were synthesized on intervention characteristics, cultural and community integration, and health outcomes.

Results: Most interventions used SMS, mobile applications, social media, or integrated digital-health systems. Cultural adaptation included language tailoring, incorporation of indigenous beliefs, and traditional medicine, while community-based approaches involved community health workers and participatory engagement. Of the 10 included studies, 9 demonstrated significant positive effects, including increased antenatal care utilization, higher facility-based delivery, improved breastfeeding and neonatal care practices, enhanced postpartum family planning uptake, reduced unintended pregnancies, and decreased postpartum depression. Community-based engagement and strong cultural integration were associated with greater effectiveness. However, some studies reported mixed or limited effects due to low user engagement or partial adaptation, highlighting implementation challenges.

Conclusion: Culturally adapted digital maternal health interventions integrated with local wisdom and community-based strategies are generally effective in improving maternal and neonatal outcomes. Strengthening community involvement and ensuring deep cultural relevance are key to optimizing intervention impact and sustainability.

Keywords: Digital health, Maternal health, Neonatal outcomes, Local Wisdom, Community-based interventions

Acute Uterine Inversion with Massive Postpartum Hemorrhage and Hypovolemic Shock: Management with Emergency Reposition and B-Lynch Uterine Compression Suture

Noorma Shabrina Farrasintya¹, Virgi Olivia², Widodo Joko Santoso³

¹Faculty of Medicine UII,

²Department of Obstetrics and Gynecology of RSUD Wonosari

*Email: shabrinafarrasintya@gmail.com

ABSTRACT

Background: Uterine inversion is an emergency obstetric associated with severe postpartum hemorrhage (PPH) may progress to hypovolemic shock which can increase maternal morbidity and mortality. Uterine atony and ongoing hemorrhage after successful reposition remain a therapeutic challenge. We report a case of acute uterine inversion complicated by PPH and hypovolemic shock, successfully managed with manual reposition and uterine compression suturing.

Case Illustration: A 32-year-old woman, P3A1, presented shortly after vaginal delivery with profuse vaginal bleeding and severe lower abdominal pain. Vital sign were obtained showed hypovolemic shock. The uterine fundus was not palpable abdominally, and a globular mass seen protruding through the vagina, confirming acute uterine inversion. Immediate resuscitation and manual repositioning using the Johnson maneuver was successfully performed in the emergency department. However, persistent uterine atony led to ongoing hemorrhage with hemoglobin dropping to 5.5 g/dL. The patient was taken to the operating room for definitive surgical management, a B-Lynch uterine compression suture was applied. Traumatic sources of hemorrhage were showed, including cervical laceration managed with ovarium clamp placement for 24 hours given active diffuse bleeding that precluded safe primary repair and grade 3 perineal laceration which was then repaired with colpoperineorrhaphy. The patient was transferred to the ICU and discharged to the ward on day five with favorable outcomes.

Discussion: Acute uterine inversion with massive PPH carries a predominant risk of hypovolemic shock and delayed referral in this case allowed progressive cervical ring contraction and blood loss. Early manual reposition remains the cornerstone of management, concurrent traumatic lacerations must be identified, and B-Lynch suture proved effective when uterotonic therapy failed.

Conclusion: This case highlights that favorable outcomes in acute uterine inversion are achievable through early recognition, prompt reposition, and timely surgical intervention. The B-Lynch compression suture is an effective uterus-sparing option and should be considered before hysterectomy in refractory PPH.

KEYWORDS: Uterine Inversion; Post Partum Hemorrhage; B Lynch Suture

A 'Missing' IUD with Subsequent Pregnancy: Undetected Extrauterine Migration to the Posterior Broad Ligament

¹Diani Wulan Dona ²Rizal Sanif, ²Ferry Yusrizal, ²Firmansyah Basir, ²Hartati, R Ismail Hadyatma

¹Obstetric and Gynecology Resident, Faculty of Medicine,
Sriwijaya University, Indonesia

²Obstetric and Gynecology Department, Faculty of Medicine,
Sriwijaya University, Indonesia

*Corresponding author:

Diani Wulan Dona (email: dianiwulandonaagma@gmail.com ; HP/WA: 082240404711)

ABSTRACT

Background: Intrauterine devices (IUDs) are recognized as highly effective long-acting reversible contraceptives. However, serious complications such as uterine perforation and extrauterine migration, although rare, remain significant clinical concerns. Ectopic migration into the posterior broad ligament is an exceptionally uncommon condition and is often asymptomatic or presents with nonspecific symptoms, frequently resulting in delayed diagnosis and contraceptive failure.

Case Presentation: We report a case of a 30-year-old woman presenting with intermittent chronic pelvic pain (VAS score 3) persisting for two years. The patient had a history of IUD insertion in February 2022 but subsequently experienced an unintended pregnancy eight months post-insertion. During vaginal delivery in May 2023, thorough examination of the uterine cavity and placenta failed to identify the IUD. Postpartum radiological evaluation confirmed extrauterine translocation of the device into the intra-abdominal cavity, warranting definitive surgical intervention.

Management and Findings: The patient underwent diagnostic and therapeutic laparoscopy, which is considered the gold standard for the management of ectopic pelvic foreign bodies. Intraoperative findings revealed that the IUD had migrated and was firmly embedded within the posterior aspect of the broad ligament, located superior to the uterosacral ligament. The device was successfully retrieved using minimally invasive surgical techniques without intraoperative or postoperative complications. The patient demonstrated an uneventful recovery.

Conclusion and Clinical Significance: A "missing IUD" associated with contraceptive failure should prompt a high index of suspicion for occult uterine perforation and device migration, even in the absence of acute symptoms. Accurate imaging modalities and timely laparoscopic intervention are essential to prevent long-term complications such as pelvic adhesions or injury to adjacent organs. This case highlights the importance of post-insertion follow-up and underscores the critical role of minimally invasive surgery in reducing patient morbidity.

Keywords: IUD migration, uterine perforation, broad ligament, laparoscopy, contraceptive failure, minimally invasive surgery

Overview of Contraceptive Method Selection Based on Maternal Characteristics among Postpartum Women at Bali Mandara Regional General Hospital, 2025–2026

Felicia Holii¹, Ida Ayu Indira Mandini Manuaba¹, Putu Trisna Handayani¹, I Gusti Ayu Cintya Paramyta¹
¹Department of Obstetrics and Gynecology, Bali Mandara Regional General Hospital, Bali, Indonesia

ABSTRACT

Background: The selection of contraceptive methods among postpartum women is influenced by various maternal characteristics, including age, parity, education level, and psychosocial factors. Postpartum family planning plays a crucial role in preventing unintended and closely spaced pregnancies, which are associated with increased risks of maternal and neonatal morbidity and mortality. Globally, approximately 260,000 women died during and following pregnancy and childbirth in 2023, with the majority occurring in low- and middle-income countries. In Indonesia, the maternal mortality ratio remains high at around 189 per 100,000 live births, while neonatal mortality continues to contribute significantly to under-five mortality. Adequate birth spacing through effective contraceptive use can reduce maternal and neonatal mortality. This study aimed to evaluate contraceptive method selection based on maternal characteristics among postpartum women at a tertiary referral center.

Methods: A hospital-based cross-sectional study was conducted at Bali Mandara Regional General Hospital from February 2025 to February 2026. A total of 383 postpartum women were included in the study using purposive sampling. The variables assessed comprised maternal age, parity, level of education, occupational status, type of contraceptive method selected, and prior history of contraceptive use. Data were collected from medical records and analyzed using descriptive statistical methods.

Results: Most postpartum women were aged 20–35 years (84.60%), were primiparous (49.87%), had completed high school education (75.20%), were employed (72.32%), and had no prior history of contraceptive use (83.03%). The majority tended to choose the minipill as their contraceptive method (36.03%).

Conclusion: Maternal characteristics play an important role in determining contraceptive method selection among postpartum women. Personalized contraceptive counseling is essential to improve postpartum family planning uptake and contribute to reducing maternal and neonatal mortality.

Keywords: postpartum women, contraceptive methods, maternal characteristics, family planning, postpartum contraception

Preterm Delivery Following Appendectomy due to Gangrenous Appendicitis in Pregnancy: A Case Report

Ida Bagus Gede Jayadharma, dr. I Keteut Edy Sudiarta, Sp. OG, dr. Heri Darmawan Sp. OG, MBiomed.
RSUD Buleleng

ABSTRACT

Introduction: Acute appendicitis is the most common non-obstetric surgical emergency requiring intervention during pregnancy. Anatomical and physiological changes in gestation often obscure classic signs and symptoms, contributing to diagnostic delays and increased maternal-fetal risks.

Case Report: A 20-year-old pregnant woman at 30 weeks' gestation (G2P0A1) with a history of intrauterine fetal demise presented with intermittent abdominal pain without associated nausea, vomiting, urinary complaints, or gastrointestinal symptoms. Initial evaluation showed stable vital signs and mild leukocytosis (neutrophil-to-lymphocyte ratio 3.91), urinalysis showed no signs of urinary tract infection, and no obstetric abnormalities were found from obstetric evaluation. She was initially managed as a case of parturient prematurus imminens (PPI) with tocolytics and corticosteroids. On day three, new-onset right lower quadrant tenderness emerged. Ultrasonography revealed findings suggestive of perforated appendicitis, including appendicolith and periappendiceal fluid. Emergency laparotomy confirmed gangrenous appendicitis. Appendectomy and omentectomy were performed successfully. Postoperative management included ceftriaxone, metronidazole, and continued obstetric monitoring. The patient delivered vaginally a live male infant weighing 1,425 g without congenital anomalies.

Discussion: Diagnosing acute appendicitis during pregnancy remains a major clinical challenge due to overlapping symptoms with obstetric conditions and altered anatomical presentations. This case highlights the diagnostic challenges of appendicitis in late pregnancy, where symptoms may mimic obstetric conditions. Ultrasonography remains a valuable first-line modality, though its sensitivity is reduced in the third trimester. Early recognition and prompt surgical intervention, supported by a multidisciplinary team, are crucial to optimizing maternal and neonatal outcomes.

Conclusion: Early detection through appropriate imaging, prompt surgical intervention, and comprehensive multidisciplinary management plays a critical role in preventing complications of acute abdominal case during pregnancy. Even in high-risk pregnancies, appropriate surgical and obstetric interventions can lead to favorable outcomes for both mother and fetus.

Keyword: appendicitis, pregnancy, acute abdomen

Correlation between Gestational Eclampsia and Family History of Hypertension: A Systematic Literature Review (2021–2025)

Lailatul Evinanta Pertiwi
RSU Aulia
Evinanta23@gmail.com

ABSTRACT

Background: Eclampsia is a complication that develops from preeclampsia. Seizures in pregnant women with hypertension (high blood pressure) and proteinuria after 20 weeks of gestation are the main and characteristic signs of eclampsia. This condition plays a significant role in maternal and perinatal morbidity and mortality. A family history of hypertension is one of the main risk factors that is frequently reported.

Objective: To analyze the relationship between a family history of hypertension and the incidence of gestational eclampsia through a systematic literature review of international and national journals (indexed in Sinta and Scopus) published from 2021 to 2025.

Methods: The method used was a systematic literature review with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach, using databases including PubMed, Scopus, and Google Scholar.

Results: The findings show that a family history of hypertension significantly increases the risk of preeclampsia progressing to eclampsia through genetic mechanisms, endothelial dysfunction, and impaired placental perfusion.

Conclusion: This study emphasizes that screening for a family history of hypertension is very important for early detection and prevention of eclampsia.

Keywords: eclampsia, preeclampsia, gestational hypertension, family history, gestational

Shock Index: A Simple Tool for Assessing Clinical Severity and Outcomes in Referred Postpartum Hemorrhage

Sabrina Kemala Hapsari¹, Mochammad Hud Suhargono¹, Eryl Mutiarawati Subrata¹, Reny Anggraeni¹
¹Bangil General Hospital, Pasuruan, Indonesia

ABSTRACT

Background: Postpartum hemorrhage (PPH) remains a leading cause of maternal mortality, particularly in referral settings where delayed recognition of shock occurs. Conventional vital signs such as systolic blood pressure (SBP) are often insensitive due to physiological compensation during pregnancy. The shock index (SI), defined as heart rate divided by SBP, is a simple parameter for early detection of hemodynamic compromise. This study aimed to evaluate the use of shock index and its relationship with clinical severity and maternal outcomes in a referral setting.

Methods: This retrospective analytic observational study included 56 postpartum hemorrhage patients referred to RSUD Bangil from January to December 2025. Patients were categorized into pre-implementation (January–May; n=19) and post-implementation (June–December; n=37) periods of shock index use. Case types were analyzed as multiple responses. Ordinal logistic regression was performed in patients with available shock index data. Clinical outcomes were assessed using a composite outcome (poor outcome), defined as transfusion, ICU admission, or surgical intervention.

Results: Retained placenta was the most common etiology (70.3%). Multivariate analysis showed that birth canal lacerations were significantly associated with higher shock index categories (OR 15.40; 95% CI: 2.65–89.49; p=0.002), while uterine atony showed a non-significant trend (OR 3.72; p=0.067). A consistent increase in poor outcomes was observed with higher shock index categories, reaching 100% in the severe group. Comparisons between periods were descriptive, as the post-implementation group presented with higher baseline severity. Shock index showed a consistent pattern in reflecting clinical severity.

Conclusion: Shock index appears to reflect clinical severity and may serve as a useful triage tool for identifying high-risk patients in referred PPH. However, its impact on outcomes could not be determined due to baseline differences between groups. Further prospective studies are needed.

Keywords: Shock Index, Postpartum hemorrhage, Maternal referral system, clinical outcomes.

Dilema Etik dalam Pengambilan Keputusan pada Cesarean Scar Pregnancy: Menyeimbangkan Keselamatan Maternal dan Viabilitas Janin

Adin Yan Permana, dr., Sp.OG; I Wayan Agung Indrawan, dr., Sp.OG, Subsp. Obgynsos, MMRS; Rudi Priyo Utomo, dr., Sp.OG, Subsp. Obgynsos; Sutrisno, dr., Sp.OG, Subsp. FER
Departemen Obstetri dan Ginekologi - RSUD Dr. Saiful Anwar /
Fakultas Kedokteran Universitas Brawijaya, Malang, Indonesia

ABSTRAK

LATAR BELAKANG: Cesarean scar pregnancy (CSP) merupakan kondisi kehamilan ektopik yang jarang namun berisiko tinggi menyebabkan komplikasi serius, seperti ruptur uterus dan progresi menjadi plasenta akreta. Deteksi dini melalui pemeriksaan ultrasonografi serta sistem rujukan yang terintegrasi berperan penting dalam upaya menurunkan angka kematian ibu (AKI). Namun, dalam praktik klinis, keberhasilan diagnosis dini tidak selalu diikuti dengan kemudahan dalam menentukan tata laksana yang tepat.

KASUS: Seorang wanita usia 30 tahun, multipara dengan riwayat seksio sesarea, datang pada kunjungan antenatal pertama dengan usia kehamilan sekitar 7–8 minggu. Pemeriksaan ultrasonografi menunjukkan gambaran cesarean scar pregnancy dengan implantasi pada area bekas luka operasi. Diagnosis ditegakkan secara dini tanpa keterlambatan. Pasien kemudian dirujuk sesuai alur dari rumah sakit tipe B ke rumah sakit tipe A dan ditangani oleh tim multidisiplin. Meskipun sistem pelayanan telah berjalan sesuai standar, kasus ini tetap memerlukan pembahasan dalam sidang etik karena adanya pertimbangan kompleks terkait pilihan tata laksana yang paling aman. Keputusan klinis akhirnya menempatkan keselamatan maternal sebagai prioritas utama, dengan mempertimbangkan risiko komplikasi serta nilai dan preferensi pasien.

PEMBAHASAN: Kasus ini menunjukkan bahwa integrasi pelayanan kesehatan reproduksi memungkinkan deteksi dini dan rujukan yang tepat. Namun demikian, kondisi klinis seperti CSP tetap menghadirkan tantangan yang tidak sepenuhnya dapat diselesaikan hanya dengan algoritma klinis. Pengambilan keputusan memerlukan pertimbangan etik yang matang, diskusi multidisiplin, serta komunikasi yang jelas dan berpusat pada pasien.

KESIMPULAN: Cesarean scar pregnancy merupakan tantangan multidimensional. Integrasi sistem pelayanan kesehatan reproduksi penting mendukung deteksi dini dan rujukan yang optimal, namun penguatan pengambilan keputusan berbasis etik tetap diperlukan untuk meningkatkan keselamatan maternal dan berkontribusi pada penurunan AKI.

KATA KUNCI: Cesarean scar pregnancy; pengambilan keputusan etik; integrasi pelayanan kesehatan reproduksi; sistem rujukan; keselamatan maternal

From Mental Health to Birth Outcomes: Integrating Antenatal Depression Screening to Reduce Preterm Birth Risk A Systematic Review and Meta-Analysis

Marzuqi Sayuti¹, Reynhard Theodorus Xaverius Saragih², Muhammad Rafi Eka Putra³, M Arifin Ilham⁴

¹Departement of Obstetrics and Gynecology, Abdul Moeloek Regional General Hospital, Lampung, Indonesia

²Medical Intern, Primary Health Care Center Banyu Urip, Surabaya, East Java, Indonesia

³Medical Intern, Sinjai Regional General Hospital, South Sulawesi, Indonesia

⁴Medical Intern, Ciamis Regional General Hospital, West Java, Indonesia

ABSTRACT

Background: Antenatal depression is a prevalent mental health condition during pregnancy and has been increasingly recognized as a potential risk factor for adverse birth outcomes, including preterm birth (PTB). However, the existing body of evidence remains inconclusive, with considerable variability across studies. This study aimed to systematically evaluate the association between antenatal depression and the risk of preterm birth.

Methods: A systematic review and meta-analysis were conducted to examine the relationship between antenatal depression and preterm birth. A comprehensive literature search was performed using PubMed and Cochrane databases to identify relevant studies. Observational studies reporting data on antenatal depression and preterm birth were included. Pooled effect estimates were calculated using the Mantel–Haenszel random-effects model. The primary outcome was preterm birth, defined as delivery before 37 weeks of gestation. Effect sizes were expressed as odds ratios (OR) with 95% confidence intervals (CI).

Results: A total of 11 studies comprising 25,663 participants were included in the analysis. Of these, 5,662 women were identified with antenatal depression, while 20,001 did not exhibit depressive symptoms. The pooled analysis demonstrated that antenatal depression was significantly associated with an increased risk of preterm birth (OR 1.63; 95% CI 1.36–1.94; $p < 0.00001$). Women experiencing antenatal depression had a 63% higher likelihood of delivering preterm compared to those without depression. The direction and magnitude of the association were generally consistent across the included studies.

Conclusion: Antenatal depression is significantly associated with an increased risk of preterm birth. These findings underscore the importance of early detection and effective management of maternal mental health during pregnancy as part of comprehensive antenatal care. Integrating routine screening for antenatal depression into maternal health services may contribute to reducing the burden of preterm birth.

Keywords: Antenatal depression, Preterm birth, Maternal mental health, Pregnancy outcomes, Meta-analysis

Term Pregnancy with Type II DM, Post Circlass A.I. Cervical Shortening, has had Two Caesari Sections

Susan Framita Yullanda

ABSTRACT

Background: Pregnancy with multiple comorbidities poses a significant challenge in obstetric practice because it increases the risk of maternal and perinatal complications. Type II diabetes increases the risk of maternal and perinatal complications, including macrosomia, preeclampsia, and operative delivery. Furthermore, a history of cervical shortening and repeated cesarean sections (CS) increase the risk of preterm delivery and intraoperative complications due to extensive adhesions. This combination of conditions places the patient in a high-risk pregnancy category requiring a multidisciplinary approach. From the perspective of social obstetrics and gynecology (Obginsos), this condition also reflects the quality of health services throughout the continuum of care, from preconception to delivery. Factors such as access to services, patient compliance, and the referral system also influence pregnancy outcomes.

Method: This case report uses a retrospective descriptive approach based on patient medical records at Dr. Mohammad Hoesin General Hospital, Palembang. Data were obtained from anamnesis, obstetric physical examination, serial laboratory tests (HbA1c, blood glucose, urinalysis), biometric ultrasonography, and cardiotocography (CTG).

Results: A 31-year-old woman, G5P3A1, 37 weeks pregnant with a high-risk pregnancy with type II diabetes on insulin, a history of 2 CS, and post-cerclage a.i cervical shortening. The patient was planned for ERCS, but during observation there was fetal distress with CTG category II which did not improve after intrauterine resuscitation. A CS cito was performed, a live baby girl was born, BBL 3610 g, Apgar score 5/7/9. Intraoperatively, no major complications were found, accompanied by tubectomy and aff cerclage. The mother's postoperative condition was stable with adequate glycemic control, while the neonate experienced initial hypoglycemia which was resolved with supportive management.

Discussion:

- The combination of pregestational type II diabetes mellitus (T2DM), a history of ≥ 2 CSs, and post-cerclage cervical shortening (cervical shortening) places the patient in a high-risk pregnancy category.
- Suboptimal glycemic control increases the risk of fetal distress and neonatal complications such as hypoglycemia.
- A history of repeated CSs is a key consideration in selecting an ERCS delivery method.
- Post-cerclage requires close monitoring until term, even if the goal is to prevent preterm labor.
- A category II CTG that does not improve after resuscitation indicates fetal compromise and is an indication for immediate termination.
- From an Obgyn and Social Services perspective, the success of achieving a term pregnancy in this case is greatly influenced by access to quality antenatal care, patient adherence to therapy, the availability of diagnostic facilities, and an effective referral system. The "three delays" model emphasizes that delays in any of these aspects can increase maternal morbidity.
- Preconception counseling for patients with type II diabetes mellitus (T2DM) and a history of repeated CSs is a key intervention in the continuum of care to reduce the risk of subsequent pregnancy complications.
- A multidisciplinary approach plays a crucial role in optimizing maternal and neonatal outcomes.

Conclusion: Term pregnancy with type II diabetes mellitus, post-circulatory failure, and a history of repeated CS is a high-risk condition that requires a multidisciplinary approach. Integrating clinical management with an obstetrics and gynecology approach through a continuum of care, optimizing glycemic control, close monitoring of fetal well-being, and a robust healthcare system play a crucial role in improving maternal and neonatal outcomes.

Keywords: Type II DM, high-risk pregnancy, fetal distress, continuum of care, Obginsos

**Inversio Uteri Postpartum setelah Persalinan oleh Tenaga Nonmedis dengan Perdarahan Masif:
Laporan Kasus**

¹ Nevi Mulya Agus Setia Dewi, ² Hana Iftitah Idayati, ³ Tendi Robby Setia

¹ Dokter Umum Rumah Sakit Umum Daerah Pagelaran, Cianjur, Jawa Barat, Indonesia

² Fakultas Kedokteran Universitas Jember, Indonesia

³ Departemen Obstetri dan Ginekologi Rumah Sakit Umum Pagelaran, Cianjur, Jawa Barat, Indonesia

ABSTRAK

Latar Belakang: Inversio uteri postpartum merupakan komplikasi obstetri yang jarang namun berpotensi menyebabkan perdarahan postpartum masif dan syok hipovolemik yang mengancam jiwa. Kondisi ini memerlukan diagnosis cepat dan penanganan segera untuk mencegah morbiditas dan mortalitas maternal.

Kasus: Dilaporkan kasus seorang wanita usia 20 tahun yang dirujuk ke rumah sakit dalam keadaan penurunan kesadaran setelah persalinan pervaginam yang ditolong oleh tenaga nonmedis. Pasien mengalami perdarahan hebat dari jalan lahir disertai adanya massa merah kebiruan pada vagina yang mengarah pada diagnosis inversio uteri postpartum. Pada pemeriksaan awal didapatkan tanda syok hipovolemik dengan tekanan darah 60/palpasi, nadi 130 kali per menit, akral dingin, serta penurunan kesadaran. Pemeriksaan laboratorium menunjukkan anemia berat dengan kadar hemoglobin 5,2 g/dL.

Pembahasan: Penatalaksanaan awal meliputi resusitasi cairan, oksigenasi, pemberian uterotonika, serta manuver Johnson untuk reposisi uterus. Namun karena perdarahan masih berlangsung dan kondisi hemodinamik tidak stabil, pasien menjalani laparotomi hingga dilakukan histerektomi supravaginalis sebagai tindakan definitif. Selama operasi pasien mengalami apneu dan dilakukan resusitasi jantung paru hingga tercapai return of spontaneous circulation. Pascaoperasi pasien dirawat di unit perawatan intensif dengan ventilasi mekanik, transfusi darah, serta pemantauan ketat hingga kondisi hemodinamik membaik dan akhirnya dipindahkan ke ruang perawatan biasa.

Kesimpulan: Inversio uteri postpartum merupakan kegawatdaruratan obstetri yang dapat menyebabkan perdarahan masif dan syok hipovolemik. Diagnosis dini, resusitasi agresif, serta tindakan operatif yang tepat sangat penting dalam meningkatkan keselamatan maternal.

Kata kunci: Inversio uteri, Perdarahan postpartum, Syok hipovolemik, Histerektomi.

Effectiveness of Local Indonesian Food–Based Nutritional Interventions in Improving Hemoglobin Levels among Pregnant Women with Anemia: A Systematic Review

Charlotte Lintang Kinasih¹, Anindya Renata Nugroho¹, Dianisa Ikarumi Enisar Sangun²

¹Medical Study Program, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada

²Department Obstetrics and Gynecology, Division of Social Obstetrics and Gynecology, RSUP dr. Sardjito

Corresponding Author: charlottelintang@gmail.com

ABSTRACT

Background: Anemia in pregnancy affects up to 40% globally and ~50% in Indonesia, increasing risks of adverse maternal and perinatal outcomes. Poor compliance with iron supplementation and limited access to iron-rich foods highlight the need for affordable, local food-based intervention alternatives.

Objective: To evaluate the effectiveness of locally available Indonesian foods (e.g., moringa, banana, guava, mung bean, tempeh) in improving hemoglobin levels among pregnant women with anemia.

Methods: Systematic search of PubMed, Scopus, ScienceDirect, Garuda, and Neliti for English and Bahasa Indonesia studies. Included: pregnant women with anemia (Hb <11 g/dL) in lower-middle income countries; local high-iron food interventions; comparator IFA or placebo; outcome mean Hb change. Randomized controlled trials (RCTs) and non-randomized studies were eligible. Risk of bias assessed with RoB 2 and ROBINS-I. Data synthesized qualitatively.

Results: Fourteen studies were included: two low-risk RCTs and 12 non-randomized studies (most at serious risk of bias). Non-randomized studies consistently showed increased hemoglobin (0.81 to 2.81 g/dL) when local foods were added to iron supplementation. Moringa (8 studies) increased Hb by 0.90–2.52 g/dL; banana (2 studies) 0.81–2.36 g/dL; guava (2 studies) 1.73–1.95 g/dL; mung bean (1 study) 2.81 g/dL. In contrast, two low-risk RCTs found that a tempeh-fruit supplement and chicken liver-eggshell crackers to be non-inferior to standard interventions. Secondary outcomes from higher-quality studies included improved birth weight, placental weight, and child growth with moringa supplementation.

Conclusion: Local foods such as moringa, banana, guava, and mung bean are affordable and culturally acceptable options in low-resource settings. When combined with iron supplementation, they are generally associated with increased hemoglobin levels in non-randomized studies, although the certainty of evidence remains limited. Despite the lack of robust RCT data, incorporating these nutrient-dense foods into dietary counselling represents a pragmatic and low-risk approach to complement standard anemia management. Further rigorous trials are needed.

Keywords: Anemia; pregnancy; local food; Moringa oleifera; Indonesia

Screening for Antenatal Mental Health Disorders and Adverse Maternal and Neonatal Outcomes: A Global Systematic Review

I Putu Gede Kayika¹, Desmon Andreas Soadun Lubis¹

¹Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Indonesia
Dr. Cipto Mangunkusumo General Hospital, Jakarta

ABSTRACT

Background: Mental health disorders affect 10-20% of pregnant women worldwide, increasing risks of preterm birth, low birth weight, and complications for mothers and babies. The World Health Organization urges routine screening, but evidence varies by region, especially low- and middle-income countries where most births occur. This review assesses global links between screening and outcomes to inform interventions.

Methods: A systematic literature search was conducted across PubMed, ProQuest, EBSCOhost, SAGE Journals, and ScienceDirect for studies published between 2016 and 2026. Eligible studies included observational and interventional research assessing antenatal mental health screening and its relationship with maternal and neonatal outcomes. Data extraction and quality assessment were performed using standardized approaches. Outcomes of interest broadly encompassed maternal and neonatal health indicators.

Results and Discussion: A total of 18 studies met the inclusion criteria, representing diverse populations and healthcare settings. Antenatal mental health disorders were consistently associated with poorer maternal and neonatal health indicators. Screening tools demonstrated acceptable performance in identifying individuals at risk, and studies implementing structured screening alongside appropriate follow-up care reported more favorable health outcomes compared to those without systematic screening approaches.

Conclusion: Antenatal mental health screening represents a critical component of comprehensive prenatal care, facilitating early identification of psychological disorders and enabling timely intervention. Strengthening the integration of standardized screening strategies into routine antenatal services is essential to improve maternal and neonatal health outcomes at a global level.

Keywords: Antenatal mental health, screening, maternal health, neonatal health, systematic review

Effectiveness of Remote Monitoring for Antenatal Care in Rural Area: A Systematic Review

Khafidloturrofi'ah

Amal Sehat Hospital, Wonogiri

ABSTRACT

Background: Access to quality of antenatal care (ANC) remains a major challenge in rural areas due to geographical barriers, limited healthcare infrastructure, and workforce shortages. Telemedicine and remote monitoring have emerged as potential solutions to bridge these gaps and improve maternal healthcare delivery.

Objective: This systematic review aimed to evaluate the effectiveness, feasibility, and outcomes of telemedicine and remote monitoring interventions for antenatal care in rural and underserved settings.

Methods: A systematic literature search was conducted across multiple databases to identify studies involving pregnant women in rural or low-resources settings receiving telemedicine-supported ANC. Eligible studies included randomized controlled trials, cohort study, and observational studies. Outcomes assessed included maternal and fetal health outcomes, patient satisfaction, healthcare access, and utilization.

Results: The findings indicate that telemedicine interventions in rural ANC can improve access to care by reducing the need for frequent in-person visits while maintaining comparable maternal and fetal outcomes to conventional care. Remote monitoring tools, such as home-based blood pressure measurement and fetal monitoring, enable early detection of complications and timely clinical intervention. A randomized study reported higher patient satisfaction and reduced prenatal stress in telemedicine-home-based and remote monitoring approaches have been shown to reduce hospital admissions and enhance patient comfort, particularly in high-risk pregnancies. However, barriers such as limited internet connectivity, digital literacy, and resource constraints remain significant challenges in rural implementation.

Conclusions: Telemedicine and remote monitoring offer effective and feasible strategies to improve antenatal care delivery in rural areas. While these approaches enhance access and patient experience, further research is needed to address implementation barriers and evaluate long-term outcomes in low-resource settings.

Keywords: antenatal care, telemedicine, remote monitoring, maternal health, rural area

Breaking the Intergenerational Cycle of Maternal and Nutritional Risk: A Systematic Review of Social Obstetrics Interventions on Maternal and Neonatal Outcomes in Low- and Middle-Income Countries

Luh Gde Evayanti¹

¹Faculty of Medicine and Health Sciences, Universitas Warmadewa, Denpasar, Bali

ABSTRACT

Introduction: Maternal and neonatal mortality remain high in low- and middle-income countries (LMICs), alongside a double burden of malnutrition. These challenges are rooted in social determinants of health and not adequately addressed by facility-based care. Social obstetrics and gynecology interventions—including community engagement, nutritional support, and health system strengthening—have been implemented to address these risks. However, their impact on maternal and neonatal outcomes and their potential to disrupt intergenerational cycles of disadvantage has not been fully synthesized.

Methods: This systematic review was conducted in accordance with PRISMA guidelines. Electronic databases including PubMed, Scopus, and Cochrane Library were searched for studies published between 2005 and 2025. Studies conducted in LMICs evaluating social or community-based obstetric and gynecologic interventions with maternal, neonatal, or nutritional outcomes were included. Twenty studies met the inclusion criteria. Due to heterogeneity in study designs and interventions, a narrative synthesis was undertaken.

Results and Discussion: Across diverse LMIC contexts, community-based interventions—particularly women’s participatory groups and home-based neonatal care—demonstrated consistent reductions in neonatal mortality. Nutritional interventions targeting pregnant women were associated with improved birth outcomes, including reductions in low birth weight, indicating a direct link between maternal nutritional status and neonatal health. Health system strengthening strategies, such as conditional cash transfers and improved access to skilled care, enhanced service utilization and indirectly contributed to improved outcomes. Notably, the evidence suggests that interventions addressing maternal health and nutrition exert downstream effects on neonatal outcomes, supporting a life-course and intergenerational framework of risk transmission.

Conclusions: Social obstetrics interventions are essential for addressing maternal and neonatal health inequities in LMICs. By targeting social determinants and combining community-based with system-level strategies, they can help break cycles of disadvantage. Future research should focus on context-specific models and strengthen evidence linking these interventions to long-term outcomes.

Keywords: Social obstetrics; intergenerational health; LMICs

Faktor-Faktor yang Mempengaruhi Kejadian Kematian Maternal dan Perinatal di RSUP Prof. Dr. R. D. Kandou Manado: Integrasi Kesehatan Reproduksi dan Hilirisasi Berbasis Kearifan Lokal sebagai Strategi Penurunan AKI, AKB & Double Burden

Davin Pratama Cahyadi, Hermie M. M. Tendean, Joice M. M. Sondakh, Anastasia M. Lumentut
Bagian/ KSM Obsteteri dan Ginekologi Fakultas Kedokteran Universitas Sam Ratulangi / Departemen
Ibu dan Anak RSUP Prof. Dr. R. D. Kandou Manado
Korespondensi: davinpratama@gmail.com, +62818550590

ABSTRAK

Latar Belakang: RS tersier sebagai rumah sakit rujukan menangani pasien maternal berisiko tinggi sehingga mempengaruhi luaran perinatal. Pendekatan yang saling terpisah antara maternal dan neonatal menghalangi upaya pencegahan kegawatan berantai. Integrasi layanan reproduksi berdasarkan kearifan lokal dapat menekan AKI, AKB, dan double burden.

Metode: Analisis data retrospektif tahun 2023-2025 menemukan total 39 kematian maternal (2023=16; 2024=12; 2025=11) dan total 96 kematian perinatal (2023=45; 2024=23; 2025=28). Penyebab utama kematian maternal adalah sepsis/syok septik ($\pm 46\%$), perdarahan post partum ($\pm 28\%$), eklampsia/HELLP ($\pm 18\%$). Luarannya umumnya meliputi IUFD, prematuritas ekstrem, BBLSR, dan asfiksia. Dalam hal perinatal, prevalensi penyakitnya adalah sepsis neonatal dan gangguan respirasi akibat prematuritas.

Pembahasan: Chi-square test pada distribusi penyebab perinatal selama periode tahun menghasilkan hasil berarti ($p < 0,05$) dengan peningkatan sepsis pada tahun 2023. Ketiga rantai kausal ini dapat dilihat, sepsis, krisis hipertensif dan perdarahan maternal menyebabkan prematuritas iatrogenik, hipoksia janin dan infeksi intrauterin yang berlanjut menjadi sepsis dan gagal napas neonatal. Terdapat banyak kasus maternal dengan adanya anemia berat, hipoalbuminemia, koagulopati dan disfungsi ginjal yang mempengaruhi luaran. Pengurangan kematian dalam periode 2024-2025 berjalan seiring dengan menurunnya prevalensi sepsis tersebut, yang menjadi akibat meningkatnya penegakan PPI, stabilisasi tata laksana ICU/NICU dan rujukan lebih cepat. Determinan kematian bukan hanya klinis tapi sistemik.

Kesimpulan: Benang merah kematian maternal-perinatal meliputi infeksi, prematuritas, dan kegawatan obstetri. Integrasi layanan reproduksi dari tingkat masyarakat hingga tersier, audit maternal-perinatal yang berkesinambungan, dan pendidikan berbasis kearifan lokal dapat menjadi jalan untuk mengurangi AKI, AKB, dan double burden.

Kata Kunci: Kematian maternal; Kematian perinatal; Sepsis neonatal; Prematuritas; Integrasi reproduksi

**Determinasi Tingginya Angka Seksio Sesarea di RSUP Prof. Dr. R. D. Kandou sebagai Pusat Rujukan:
Analisis Faktor Klinis dan Non-Klinis**

Saint William Moningka, Hermie M. M. Tendean, Joice M. M. Sondakh, Anastasia M. Lumentut
Departemen Obstetri dan Ginekologi, Fakultas Kedokteran, Universitas Sam Ratulangi/RSUP Prof. Dr.
R. D. Kandou, Manado, Indonesia
Korespondensi: moningka.william9@gmail.com

ABSTRAK

Latar Belakang: Angka seksio sesarea global meningkat melampaui rekomendasi WHO, dipengaruhi faktor klinis, demografi, dan sistem rujukan. Tingginya angka di rumah sakit rujukan mencerminkan kompleksitas kasus serta faktor non-medis. Keterlambatan dan ketidaktepatan rujukan berkontribusi pada peningkatan risiko komplikasi maternal dan perinatal, sehingga diperlukan analisis multidimensional untuk membedakan indikasi rasional dan overutilization.

Tujuan: Menganalisis faktor klinis, demografi, rujukan, dan non-medis yang berkontribusi terhadap tingginya angka seksio sesarea.

Metode: Studi kohort retrospektif berbasis rumah sakit di RSUP Prof. Dr. R. D. Kandou periode 2023–2025 pada 2.587 pasien dengan Persalinan SC sebanyak 1988 pasien. Data rekam medis mencakup variabel maternal dan neonatal, dianalisis secara deskriptif dengan total sampling, serta telah memperoleh persetujuan etik.

Hasil: Mayoritas ibu berusia 20–34 tahun, multipara, berasal dari wilayah urban, dengan pendidikan SLTA dan status ibu rumah tangga. Pasien seksio sesarea dominan pada 4–5 kali kunjungan. Luaran perinatal pada kedua kelompok umumnya baik. Risiko maternal lebih tinggi pada seksio sesarea, terutama pada kasus gawat obstetri dan darurat.

Diskusi: Seksio sesarea dipengaruhi usia ≥ 35 tahun, faktor sosioekonomi, akses layanan, paritas, riwayat obstetrik, serta kualitas ANC. Luaran perinatal lebih dipengaruhi usia gestasi dan berat lahir dibanding metode persalinan. Risiko maternal yang lebih tinggi pada seksio sesarea mencerminkan confounding by indication, dengan indikasi klinis seperti preeklampsia dan perdarahan.

Kesimpulan: Seksio sesarea terutama berkaitan dengan faktor klinis berisiko tinggi, dengan luaran perinatal umumnya baik. Pemilihan metode persalinan harus berbasis indikasi medis rasional dan evaluasi risiko individual.

Kata Kunci: Faktor Klinis, Faktor Non-Klinis, Seksio Sesarea

Fetal Bradycardia as a Reversible Manifestation of Severe Maternal Hypokalemia with Transaminitis susp. Secondary Rhabdomyolysis in Late Pregnancy: A Case Report

Juan Ortega Putra¹, Fionna Felicia², Brillian Segala Putra², Munawar Latif³

¹General Practitioner, Pulang Pisau Regional General Hospital, Central Kalimantan, Indonesia

²Department of Obstetrics and Gynecology, Pulang Pisau Regional General Hospital, Central Kalimantan, Indonesia

³Department of Internal Medicine, Pulang Pisau Regional General Hospital, Central Kalimantan, Indonesia

ABSTRACT

Background: Hypokalemia in pregnancy is a relatively uncommon condition; however, it has the potential to cause significant morbidity in both the mother and the fetus. Fetal bradycardia is generally interpreted as a manifestation of intrauterine hypoxia, but it may also result from maternal metabolic imbalances. Rhabdomyolysis leads to skeletal muscle breakdown, resulting in the release of intracellular components into the systemic circulation and the subsequent development of complications. Clinical manifestations include myalgia, muscle weakness, dark-colored urine, and elevated serum creatine kinase (CK) levels.

Case Presentation: A 44-year-old primigravida at 33–34 weeks of gestation presented with progressive weakness, myalgia, and a history of dark-colored urine. Laboratory evaluation revealed severe hypokalemia (1.51 mEq/L) and elevated liver enzymes (SGOT/SGPT 278/193 U/L), with normal hematologic parameters and renal function. Electrocardiography demonstrated T-wave flattening, ST-segment depression, and U waves, consistent with hypokalemia. Obstetric ultrasound showed fetal bradycardia (101 bpm). Primary hepatic conditions such as AFLP and SLE were excluded. Although CK measurement was unavailable, elevated transaminases suggested secondary rhabdomyolysis. Following intravenous potassium correction, serum potassium normalized to 4.17 mEq/L, accompanied by clinical improvement, resolution of transaminase elevation, and an increase in fetal heart rate that remained within the normal range. The pregnancy was terminated at 37–38 weeks of gestation, resulting in the delivery of a vigorous neonate.

Discussion: Hypokalemia disrupts myocardial electrophysiology, predisposing to conduction abnormalities. In pregnancy, increased fetal potassium demand and plasma volume expansion may contribute to decreased maternal potassium levels. Placental transport mechanisms regulate electrolyte exchange. In this case, hypokalemia was associated with reversible fetal bradycardia, while transaminitis likely reflected rhabdomyolysis secondary to electrolyte imbalance.

Conclusion: Severe hypokalemia in pregnancy may cause reversible fetal bradycardia. Prompt evaluation and correction of electrolyte imbalances are essential to optimize maternal and fetal outcomes.

Keywords: Severe hypokalemia, fetal bradycardia, rhabdomyolysis, pregnancy.

The Accuracy Of sFlt-1/PLGF in Predicting Time to Delivery in Patients with Preeclampsia: A Systematic Review

Tri Rahmania Pertiwi*¹, Rina Novitriani*²

¹Islamic Hospital Ar Rasyid Palembang, South Sumatera, Indonesia

²Resident in Obstetrics and Gynecology, Faculty of Medicine, Universitas Sriwijaya/Mohammad Hoesin General Hospital

ABSTRACT

Background: Preeclampsia is a leading cause of maternal and perinatal morbidity. Predicting time to delivery is critical for clinical management. The sFlt-1/PIGF ratio is a biomarker of placental dysfunction, but its accuracy in predicting time to delivery has not been systematically evaluated. This systematic review aims to evaluate the accuracy of the sFlt-1/PIGF ratio in predicting time to delivery in women with preeclampsia.

Methods: A systematic search was conducted in PubMed, ScienceDirect. Studies involving women with preeclampsia, measuring the sFlt-1/PIGF ratio, and reporting time to delivery were included. Study quality was assessed using the Newcastle-Ottawa Scale (NOS).

Results: Fourteen studies (n=18,446; 2014–2026) from 10 countries were included. All studies consistently showed that an elevated sFlt-1/PIGF ratio correlated with shorter time to delivery. The cutoff of 38 was most widely validated; a ratio >38 increased the likelihood of imminent delivery 2.8–2.9-fold, with an NPV of 99.3% for ruling out delivery within one week. Higher cutoffs yielded stronger positive predictive value: ratio >655 predicted delivery within 48 hours in 92% of cases, and ratio ≥224.6 predicted delivery within one week in 78.9% of cases. The strongest negative correlation between ratio and days to delivery was $R=-0.48$. All studies assessed by NOS scored 8–9/9, indicating low risk of bias.

Conclusion: The sFlt-1/PIGF ratio accurately predicts time to delivery in preeclampsia. A cutoff of 38 offers optimal NPV for ruling out imminent delivery, while higher thresholds identify patients at risk of delivery within 48 hours. This ratio is a reliable tool to guide clinical decision-making in preeclamptic patients.

Keywords: sFlt-1/PIGF ratio; preeclampsia; time to delivery; placental biomarker

Dampak Perubahan Iklim terhadap Luaran Maternal dan Neonatal, Adakah Hubungan dan Solusi Mengatasinya?: Sebuah Telaah Sistematis

Arya Ivan Mahendra^{1,2}, Yudianto Budi Saroyo², Delvanny Alfikri Rekaputri Wicaksono¹, Dawa Fauz Susanto^{2,3}

¹Fakultas Kedokteran Universitas Airlangga, Surabaya, Indonesia

²Departemen Obstetri Ginekologi, RSUPN Cipto Mangunkusumo, Fakultas Kedokteran Universitas Indonesia, Jakarta, Indonesia

³Fakultas Kedokteran Universitas Pembangunan Nasional Veteran Jakarta, Jakarta, Indonesia

ABSTRAK

Latar Belakang: Perubahan iklim merupakan ancaman kesehatan global yang semakin nyata dampaknya dan perlu segera dikendalikan. Permasalahan ini berdampak nyata pada ibu hamil dan janin, namun seringkali diabaikan. Bahaya iklim seperti peningkatan suhu, gelombang panas, bencana hidrometeorologi, gangguan pangan, serta terganggunya layanan kesehatan berhubungan dengan meningkatnya risiko luaran maternal dan perinatal yang merugikan.

Metode: Telaah sistematis ini disusun mengikuti pedoman PRISMA. Pencarian literatur dilakukan secara komprehensif pada PubMed, ScienceDirect, dan Scopus. Strategi pencarian menggabungkan istilah kata kunci yang berkaitan dengan “climate change”, “climatic events”, “flood”, “heat exposure”, “maternal”, “maternal mortality”, “neonatal”, dan “neonatal mortality”. Permasalah perubahan iklim ini akan dikaitkan dengan luaran yang merugikan. Studi yang memenuhi kriteria akan diseleksi dilanjutkan dengan ekstraksi data dan penilaian kualitas metodologis.

Hasil Diskusi: Sebanyak 5.275 artikel telah dilakukan identifikasi, lalu dilakukan skrining dan dilanjutkan ekstraksi pada manuskrip yang sesuai kriteria untuk menganalisis faktor yang berkontribusi terhadap peningkatan kematian dan luaran buruk dapat dikelompokkan ke dalam empat domain utama, yaitu heat exposure, keterbatasan sumber daya dan akses kehidupan, faktor kesehatan dan layanan kesehatan, serta bencana alam terkait iklim. Paparan panas muncul sebagai salah satu determinan yang paling konsisten. Di India, suhu tinggi selama kehamilan dikaitkan dengan tambahan sekitar 2 kematian bayi per 1.000 kelahiran hidup. Di Mozambik, suhu neonatus saat admisi menunjukkan hubungan non-linear dengan mortalitas, dengan dampak yang berbeda pada suhu rendah dan tinggi, hanya 32,4% bayi yang berada dalam kondisi normotermia saat masuk, hal ini menunjukkan perlunya strategi stabilisasi termal dan pemantauan suhu yang lebih ketat.

Kesimpulan: Perubahan iklim berpotensi memengaruhi luaran maternal dan neonatal melalui jalur biologis langsung maupun jalur tidak langsung. Temuan ini menegaskan perlunya respons kesehatan ibu dan bayi yang lebih adaptif, sensitif terhadap iklim, dan berorientasi pada kelompok paling rentan.

Kata Kunci: iklim, maternal, neonatal, pemanasan global

Comparison of Clinical, Biomarker, Ultrasonographic, and Machine Learning-Based Predictive Models for Preeclampsia: a Systematic Review and Meta-Analysis

Rivaldo Go¹, Elizabet Catherine Jusuf²

¹Medical Doctor, Faculty of Medicine, Hasanuddin University

²Department of Obstetric and Gynaecology, Faculty of Medicine, Hasanuddin University

ABSTRACT

Background: Preeclampsia (PE) remains a major cause of maternal and perinatal morbidity, and multiple predictive approaches have been proposed, including clinical, biomarker, ultrasonographic, machine learning-based, and combined multimodal models. However, their relative performance has not been consistently compared across PE Onset.

Method: We conducted a systematic review and meta-analysis of 23 observational studies evaluating predictive models for PE. Studies were grouped by PE onset, including preterm PE, early/early-onset PE, late/term PE, and any PE, and by intervention, including clinical-only, biomarker, ultrasonographic, machine learning-based, and combined multimodal models. Random-effects pooling was performed for area under the curve (AUC/AUROC) and sensitivity at fixed false-positive rates.

Result and Discussion: Predictive performance was strongest for early PE, with a pooled AUC of 0.951 (95% CI 0.924–0.979) and pooled sensitivity of 91.1% at a 10% false-positive rate. For preterm PE, the pooled AUC was 0.865 (95% CI 0.831–0.893), while pooled sensitivity at approximately 10% false-positive rate was 73.1%. Performance was lower and more heterogeneous for late/term PE, with pooled AUC 0.843 (95% CI 0.773–0.913), and for any PE, with pooled AUC 0.819 (95% CI 0.798–0.839). Machine learning-based models showed the highest pooled discriminative performance for preterm PE, but most high-performing machine learning models relied on the same multimodal inputs used by conventional combined models. Ultrasonographic-only and clinical-only models generally showed weaker performance.

Conclusion: Combined multimodal predictive models performed best overall, particularly for early and preterm PE. Machine learning-based models were highly competitive, but their advantage appeared to depend largely on multimodal predictor integration rather than algorithmic complexity alone.

Keywords: Predictive, model, preeclampsia, systematic review, meta-analysis.

Early Delivery as Active Management in Severe Intrauterine Growth Restriction due to Hypertensive Disorders: A case report

Alfia Putri Aziza, Supriyatiningih
Universitas Muhammadiyah Yogyakarta

ABSTRACT

Background: Severe intrauterine growth restriction (IUGR) is a major contributor to perinatal morbidity and mortality and is frequently associated with hypertensive disorders of pregnancy. Early delivery may prevent further fetal compromise caused by placental insufficiency, but it must be balanced against the risks of neonatal complications. This case report aims to evaluate whether early delivery as an active management strategy improves neonatal outcomes.

Case Presentation: A 29-year-old woman at 37 weeks and 3 days of gestation presented with hypertensive disorder of pregnancy and progressive fetal growth restriction (gravida 2 para 0 abortus 1). Hypertension was first identified at 28 weeks of. The patient experienced worsening blood pressure and persistent fetal growth restriction despite receiving regular prenatal care. Serial ultrasound showed a declining estimated fetal weight trajectory consistent with severe IUGR, which was further supported by abnormal uterine artery Doppler findings, including an elevated pulsatility index (PI) of 1.8 (above the 95th percentile for gestational age) and early diastolic notching, which indicated increased uteroplacental resistance. At 37 weeks and 4 days, an early cesarean delivery was carried out, a live infant weighing 1740 grams was delivered with Apgar scores of 8 and 9, without requiring neonatal intensive care or showing immediate complications.

Discussion: Current evidence from randomized controlled trials and clinical guidelines supports early delivery at or beyond 37 weeks in pregnancies complicated by hypertensive disorders and IUGR. Early intervention reduces the risk of intrauterine deterioration while maintaining acceptable neonatal outcomes. This case supports early delivery as an effective active management strategy for severe IUGR.

Conclusion: Early delivery in pregnancies complicated by hypertensive disorders and severe intrauterine growth restriction (IUGR) may enhance neonatal outcomes and avert additional fetal compromise. Evidence-based and individualized clinical decision-making is essential to optimize both maternal and neonatal outcomes.

Keywords: severe IUGR, hypertensive disorder of pregnancy, early delivery, neonatal outcome, case report

Profil Rujukan Maternal di RSUD Dr. Doris Sylvanus Palangkaraya Tahun 2024-2025

Kezia Marcella Putri, Putu Aditya Adi Purbawa
Universitas Palangka Raya

ABSTRAK

Latar Belakang: Angka kematian ibu (AKI) di Indonesia tertinggi ketiga di Asia Tenggara. Target penurunan AKI 77 per 100.000 kelahiran hidup, untuk mengejar target SDG's yaitu < 70 per 100.000 kelahiran hidup tahun 2030. Di Kalimantan Tengah Angka Kematian Ibu berfluktuasi setiap tahunnya dengan berbagai penyebab. Oleh karenanya, penelitian ini bertujuan untuk mengetahui karakteristik rujukan maternal di IGD RSUD dr. Doris Sylvanus Palangkaraya.^{1,2}

Metode: Penelitian ini menggunakan desain penelitian deskriptif untuk mengetahui karakteristik rujukan maternal dengan menggunakan total sampling. Dilakukan telaah menggunakan buku register rujukan, rekam medis elektronik dari Januari 2024-Desember 2025 di IGD RSUD dr. Doris Sylvanus.

Hasil Diskusi: Sebanyak 65% ibu hamil berusia 20 hingga <35 tahun, dengan usia termuda 13 tahun, total 46 ibu hamil usia <20 tahun serta 118 ibu hamil usia >35 tahun. Pada rujukan obstetri, hipertensi dalam kehamilan sebanyak 85 kasus serta ibu hamil dengan penyakit menular HIV/AIDS (3 orang), Tuberkulosis (2 orang), diabetes (4 orang), skizofrenia (1 orang), serta GMO (1 orang). Beberapa hal diatas dapat mempengaruhi angka kematian ibu secara tidak langsung.³⁻⁶ Sebanyak 75 orang dirujuk dari praktik bidan mandiri, Puskesmas Pahandut sebanyak 61 orang, dan RSUD Kuala Kurun sebanyak 40 orang. Penguatan dan penyegaran terkait sistem rujukan terencana perlu dilakukan, untuk menguatkan rujukan maternal, serta mengurangi angka kematian ibu dan bayi secara langsung maupun tidak langsung.

Kesimpulan: Terdapat 420 rujukan ke IGD PONEK RSUD dr. Doris Sylvanus. Dengan variasi kasus terbanyak hipertensi dalam kehamilan, serta beberapa kasus yang dapat meningkatkan risiko kematian ibu, mempersulit proses persalinan, serta berdampak buruk bagi bayi. Oleh sebab itu perlu dilakukan penguatan sistem rujukan terencana, untuk mengurangi angka kematian ibu dan bayi di Provinsi Kalimantan Tengah.

Kata Kunci: kehamilan berisiko, rujukan terencana, usia

Characteristics of Pregnant Women Aged ≤ 20 Years and Delivery Outcomes at Pupuk Kaltim Hospital: 2024– 2025

Mahy Ragib Alusy Rahman¹, Muhammad Shaifullah², I Putu Satrya Wijaya³

¹Medical Intern, Pupuk Kaltim Hospital, Bontang City, East Kalimantan, Indonesia.

²Medical Intern, Nunukan Regional General Hospital, Nunukan Regency, North Kalimantan, Indonesia.

³Obstetrician and Gynecologist, Pupuk Kaltim Hospital, Bontang City, East Kalimantan, Indonesia.

ABSTRACT

Background: Pregnancy at a young age (≤ 20 years) is a high-risk condition associated with various maternal and neonatal complications. This biological process requires comprehensive care to ensure safety. This study aims to analyze the characteristics and delivery outcomes of adolescent pregnancies at Pupuk Kaltim Hospital, Bontang from January 2024 to July 2025. This descriptive study utilized secondary data from medical records at Pupuk Kaltim Hospital and a cohort from the Bontang Utara II Community Health Center. Using a total sampling technique, 59 pregnant women aged ≤ 20 years were included in the study. Data were analyzed using frequency distributions and percentages. The results showed that the largest group of pregnant women aged ≤ 20 years was 18-20 years, with 51 people (86.44%). Most were taller than 145 cm, totaling 47 people (79.7%). Normal nutritional status was observed in 50 people (84.7%). High school or equivalent was the most common education level, with 31 people (52.5%). Most had a term gestational age, with 56 people (94.9%). Normal hemoglobin levels were seen in 37 people (62.71%). Regarding delivery outcomes, vaginal birth was the most prevalent with 47 people (79.8%), and most infants had a normal birth weight (48 people, 81.4%). The distribution of infant sex was nearly balanced, with a slight predominance of females (50.8%). Based on the study, adolescent pregnancies at Pupuk Kaltim Hospital predominantly occur in the late adolescent group (18–20 years) with generally favorable delivery outcomes. However, the prevalence of non-normal hemoglobin levels remains a clinical concern that requires optimized antenatal care.

Keywords: Adolescent pregnancy, pregnancy outcomes

Major Congenital Anomalies in a Tertiary Referral Hospital in Riau: Implications for Improving Obstetric Services to Reduce Neonatal Mortality

Nur Khairani Putri¹, Febriani²

¹Resident of Obstetrics and Gynaecology, Faculty of Medicine, Riau University - Arifin Achmad General Hospital, Pekanbaru, Indonesia

²Department of Obstetrics and Gynaecology, Fetal Medicine Division, Faculty of Medicine, Riau University - Arifin Achmad General Hospital, Pekanbaru, Indonesia

ABSTRACT

Background: Congenital anomalies are a major contributor to neonatal mortality worldwide, accounting for approximately 295,000 neonatal deaths annually. In Indonesia, delayed antenatal detection and limited access to specialized obstetric services contribute to adverse neonatal outcomes. Strengthening antenatal screening and referral systems is therefore an important strategy to reduce neonatal mortality.

Objective: To describe the spectrum, clinical characteristics, and perinatal associations of congenital anomalies among neonates admitted to RSUD Arifin Ahmad, Riau, Indonesia between 2023 and 2025.

Methods: A retrospective descriptive case series was conducted using medical records of neonates diagnosed with congenital anomalies from January 2023 to December 2025. Data collected included gestational age, birth weight, type of anomaly, and associated perinatal conditions.

Results: More than 50 neonates with congenital anomalies were identified. Central nervous system, gastrointestinal, cardiovascular, and genitourinary anomalies were the most frequent. Common diagnoses included hydrocephalus, holoprosencephaly, gastroschisis, intestinal atresia, congenital heart disease, fetal hydrops, and chromosomal syndromes. Most affected neonates were preterm and/or had low birth weight.

Conclusion: Congenital anomalies in this tertiary referral center predominantly consisted of major multisystem anomalies and were strongly associated with prematurity and fetal growth restriction, highlighting the importance of early antenatal detection and referral.

Keywords: Congenital Anomalies; Neonates; Prematurity; Fetal Growth Restriction; Tertiary Referral Hospital

Bridging Tradition and Modern Care: A Comprehensive Meta-Analysis of Traditional Birth Attendant Training Interventions on Perinatal, Neonatal, and Maternal Mortality

Amandus Michael Martin^{1,2,3}, Mohammad Haekal³, Agus Supriyadi³, Sudirmanto³, Hadi Sjarbaini³,
Gde Suardana³, Aidrus Abdul Muthalib³, Muhammad Dwi Priangga³

¹Medical Doctor, Faculty of Medicine, Universitas Brawijaya, Malang, Indonesia

²Master of Biomedical Science, Faculty of Medicine, Universitas Brawijaya, Malang, Indonesia

³Department of Obstetrics and Gynecology, National Women and Children Health Center Harapan Kita, Jakarta, Indonesia

ABSTRACT

Introduction: Perinatal and maternal mortality remain major global health challenges, particularly in developing countries where access to skilled birth attendants is limited. In such settings, traditional birth attendants (TBA) continue to provide frontline maternal care. Training interventions have been implemented to improve TBA ability in promoting safe delivery practices, recognizing complications, and facilitating timely referral. As a culturally embedded and scalable approach, TBA training may serve as a bridge between traditional practices and modern healthcare systems.

Objective: This systematic review and meta-analysis aims to evaluate the effectiveness of traditional birth attendant training interventions in reducing perinatal, neonatal, and maternal mortality across developing countries.

Methods: A systematic literature search was conducted using PubMed, Cochrane Library, ScienceDirect, Springer, and Scopus databases. Studies were selected based on predefined inclusion criteria. This meta-analysis was reported in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines. Bias assessment was analyzed using Cochrane's Risk of Bias-2 (RoB-2) tool adapted for cluster randomized trials. Review Manager 5.4 was utilized for statistical analysis, incorporating random-effects models to address clinical heterogeneity.

Results: Among the screened articles, seven cluster-randomized controlled trials conducted across developing countries involving 144,992 participants were included. This meta-analysis demonstrated that traditional birth attendant training interventions were associated with a significantly lower perinatal mortality rate (RR 0.81, 95% CI 0.71- 0.93, $p = 0.003$), neonatal mortality rate (RR 0.81, 95% CI 0.73-0.89, $p < 0.0001$), and maternal mortality rate (RR 0.72, 95% CI 0.58-0.91, $p = 0.005$) compared with traditional birth attendant without training interventions.

Conclusion: Traditional birth attendant training interventions were associated with reduced perinatal, neonatal, and maternal mortality across developing countries. Strengthening structured training and integration of TBA into formal healthcare systems represents a promising, culturally adaptive, and scalable strategy to reduce mortality in resource-limited settings.

Keywords: Maternal, Mortality, Neonatal, Perinatal, TBA

Between Autonomy and Survival: A Case of Eisenmenger Syndrome with Contraceptive Refusal Leading to Pregnancy Termination

Nurrohmah Tri Astuti

ABSTRACT

Background: Eisenmenger syndrome is an advanced form of Pulmonary Arterial Hypertension (PAH) resulting from a large anatomic shunt caused by congenital heart disease. According to the 2025 European Society of Cardiology (ESC) Guidelines, women with severe PAH, idiopathic PAH unresponsive to vasodilators, and Eisenmenger syndrome face the highest risk of maternal and fetal mortality. Women with Eisenmenger syndrome generally cannot tolerate pregnancy due to additional risks of right ventricular failure and paradoxical embolism. Reproductive-age women with PAH require early counseling upon diagnosis, with strict recommendations to avoid pregnancy and clear education on individualized contraceptive options. The 2025 ESC Guidelines recommend the Levonorgestrel-releasing intrauterine device (IUD) as the safest and most effective contraception for women with heart disease.

Case Report: We report the case of a 40-year-old pregnant woman (G6P2A3, 7 weeks and 6 days gestation) presenting with observation for hemoptysis suspected to be related to pulmonary hypertension (PH). Her clinical profile included PH mWHO risk class IV, NYHA functional class III due to a bidirectional patent ductus arteriosus (PDA) with a dominant right-to-left shunt (Eisenmenger syndrome), right ventricular dilatation, D-shaped left ventricle, mild mitral, pulmonary, and tricuspid regurgitation, underlying congenital heart disease, polycythemia vera, a history of a Cesarean section 10 years ago, and two prior curettages. Diagnosed with Eisenmenger syndrome in 2017, she was explicitly advised against pregnancy and recommended to use an IUD. However, due to fear, she refused the IUD and had not used any contraception since 2017. A multidisciplinary discussion (involving Obstetrics & Gynecology, Cardiology, Anesthesiology, and the Pregnancy Termination Committee at Sardjito Hospital) concluded that pregnancy termination followed by long-acting contraception (IUD or tubal ligation) was imperative.

Management and Outcome: Following multidisciplinary counseling, the patient opted for tubal ligation (permanent sterilization) as her contraceptive method. The pregnancy termination and tubal ligation were performed at a tertiary care facility. Hemodynamic stability was strictly maintained throughout the procedure by avoiding sudden changes in systemic and pulmonary vascular resistance. The patient tolerated the procedure well without immediate complications and underwent close postoperative monitoring.

Discussion: This case highlights the complex interplay between clinical guidelines, patient preferences, and ethical considerations in managing pregnancies complicated by Eisenmenger syndrome. Despite clear medical recommendations to avoid pregnancy and utilize highly effective contraception, patient refusal—driven by fear and personal beliefs—can lead to life-threatening situations. The patient's refusal in this case aligns with a 2025 study by Shimels et al., which identified fear of insertion pain, partner opposition, and misconceptions as primary barriers to IUD uptake. In Indonesia, the IUD utilization rate remains critically low at 8.3% (Indonesian Ministry of Health, 2021). This underscores a significant gap between guideline-based care and real-world patient behavior. Furthermore, this case emphasizes the critical need for patient-centered counseling and multidisciplinary management.

Conclusion: This case underscores the ethical dilemma between respecting patient autonomy and ensuring maternal safety. The refusal of effective contraception can lead to life-threatening consequences, thus highlighting the absolute necessity of shared decision-making.

From Tradition to Hemostasis: A Systematic Review of Postpartum Herbal Uterotonics and Their Integration into Modern Strategies for Preventing Postpartum Hemorrhage

Nuraharvi¹, Bobby Indra Utama²

¹Lenggogeni Mother and Child Hospital, Padang, Indonesia

²Lenggogeni Mother and Child Hospital, Padang, Indonesia

ABSTRACT

Background: Postpartum hemorrhage (PPH) remains the leading cause of preventable maternal mortality, particularly in settings where access to pharmacological uterotonics is limited. Across many cultures, traditional herbal uterotonics have long been used as part of postpartum care, yet their clinical value remains underrecognized and poorly integrated into modern obstetric practice. This study aims to critically evaluate the effectiveness of herbal uterotonics in preventing PPH and explore their potential role in bridging traditional practices with evidence-based maternal health strategies.

Methods: A systematic review was conducted following PRISMA guidelines across multiple databases. Five eligible studies (randomized controlled trials, cohort studies, and mixed-method research) were included, evaluating herbal uterotonics such as *Leonurus japonicus*, Shenghua decoction, and other traditional formulations. Primary outcomes included postpartum blood loss, hemoglobin decline, and incidence of PPH. Secondary outcomes included uterine involution and real-world implementation in community settings. Due to heterogeneity, findings were synthesized narratively.

Results: Herbal uterotonics demonstrated consistent signals of benefit across studies. Quantitative evidence showed reduced blood loss and hemoglobin decline in herbal intervention groups, with combination therapy (herbal + oxytocin) yielding the lowest PPH incidence (as low as 11.1%, $p < 0.01$), suggesting a synergistic mechanism. Observational data further indicated improved uterine involution associated with specific herbal compounds. Importantly, qualitative findings revealed that traditional birth attendants routinely utilize herbal uterotonics as frontline interventions, highlighting their real-world relevance in low-resource settings. Despite promising outcomes, the evidence base remains limited by small sample sizes, heterogeneity of formulations, and lack of standardization. This underscores a critical gap between widespread traditional use and formal clinical validation.

Conclusion: Herbal uterotonics represent a promising yet underutilized resource in PPH prevention. Integrating evidence-based traditional medicine into formal maternal health systems may offer a culturally adaptive and scalable strategy to reduce maternal mortality. Future large-scale trials are essential to validate efficacy, safety, and implementation frameworks.

Keywords: Postpartum hemorrhage; herbal uterotonics; traditional medicine; maternal mortality; uterine involution

Preterm Birth Associated with Delayed Healthcare Access and Prolonged Travel: A Case Report

Ahmad Rivai, MD¹; Hari Sasongko, MD, Sp. OG²

¹General Practitioner, Aisyiyah Hospital Muntilan

²Obstetrician and Gynecologist, Aisyiyah Hospital Muntilan

ABSTRACT

Background: Preterm birth remains a leading cause of neonatal morbidity and mortality, particularly in extreme prematurity. Both clinical factors, such as infection, and social determinants, including delayed access to healthcare, may contribute significantly.

Case: A 27-year-old primigravida at 27+6 weeks of gestation presented after a 9-hour journey with vaginal spotting and uterine contractions. Symptoms began during travel; however, the patient delayed seeking medical care despite being at her residence in Magelang. On admission, she was febrile (38°C), with cervical dilatation of 8 cm and leukocytosis (17,170/ μ L). Clear amniotic fluid leakage suggested premature rupture of membranes. Initial management included intravenous fluids, ampicillin followed by oral amoxicillin, antenatal corticosteroids, paracetamol, progesterone support, and urinary catheterization. The patient was counseled regarding prognosis, and informed consent was obtained. Spontaneous vaginal delivery occurred approximately 10 hours after admission. A female neonate weighing 790 g was delivered with Apgar scores of 5, 6, and 6 at 1, 5, and 10 minutes, respectively. The neonate required intubation, mechanical ventilation, umbilical line placement, surfactant administration, and caffeine therapy. Despite intensive care, the neonate's condition deteriorated, and death occurred within 12 hours of life.

Discussion: Extreme preterm birth (<28 weeks) carries a high risk of neonatal morbidity and mortality and is frequently associated with maternal complications. Intrauterine infection is a well-recognized trigger of preterm labor through inflammatory pathways; maternal fever and leukocytosis strongly suggest an underlying infectious process. Long-distance travel during pregnancy may exacerbate the condition by increasing physical stress and delaying access to medical care, resulting in delayed presentation and reduced opportunities for early intervention. From an obstetric social perspective, this case reflects components of the Three Delays Model, particularly delays in decision-making and reaching healthcare facilities, contributing to adverse maternal and neonatal outcomes.

Conclusion: This case highlights the multifactorial nature of extreme preterm birth involving intrauterine infection and delayed healthcare access. Early symptoms during prolonged travel, followed by delayed decision-making in seeking care, contributed to late presentation in advanced labor and early neonatal mortality. Early recognition of symptoms and timely access to obstetric care are essential to improve outcomes.

Keywords: Extreme preterm birth; delayed healthcare access; long-distance travel; very low birth weight

Obginsos Approach in a Grand Multiparous Woman with Multiple Cesarean Sections and Contraceptive Refusal: A Case Report on Severe Maternal Risk

Paulya Dwi Prasetyorini¹, Nareswari Imanadha Cininta Marcianora²

¹Department of Obstetrics and Gynecology, Dr. Soetomo General Academic Hospital, Surabaya, Indonesia

²Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

ABSTRACT

Background: Grand multiparity, multiple previous cesarean sections, and short interpregnancy intervals are major risk factors for severe maternal morbidity. Refusal of contraception further increases these risks and is often influenced by social, cultural, and family-related factors. The Obstetrics and Gynecology Social (Obginsos) approach integrates clinical management with sociocultural perspectives to improve maternal outcomes.

Case Presentation: A 37-year-old G12 P10-1-0-10 woman, a grand multipara with a twin pregnancy, presented with anemia. She had a history of four previous cesarean sections and a short interpregnancy interval of less than one year since her last cesarean delivery. Despite repeated counseling regarding the risks of future pregnancies, both the patient and her husband refused sterilization. During surgery, the uterus was found to be markedly thinned with uterine dehiscence and dense adhesions to the urinary bladder. Additional counseling (KIE) was provided intraoperatively to the husband; however, consent for sterilization was again declined.

Discussion: This case illustrates the complex interaction between clinical risk factors and social determinants, including limited acceptance of family planning, cultural beliefs, and family decision-making dynamics. The lack of effective, culturally sensitive, community-based interventions contributes to persistent contraceptive refusal, increasing the risk of repeated high-risk pregnancies and severe maternal complications.

Conclusion: An integrated Obginsos approach combining high-quality clinical care, culturally sensitive counseling, and family-centered interventions is essential in managing high-risk pregnancies. Strengthening reproductive health education and community engagement is crucial to prevent severe maternal morbidity and contribute to reducing maternal mortality.

Keywords: Obginsos, grand multiparity, cesarean section, contraceptive refusal, maternal risk

G4P2A1 at 7 Weeks of Gestation with Heterotopic Pregnancy (Intrauterine Fetal Death and Left Tubal Ectopic Pregnancy)

Beby Dwi Lestari, Dimas Djiwandono Daryanto

Obstetrics and Gynecology Residency Program, Faculty of Medicine, Universitas Sriwijaya, Dr. Mohammad Hoesin General Hospital, Palembang, Indonesia

ABSTRACT

Background: Heterotopic pregnancy is a rare condition characterized by the simultaneous presence of intrauterine and extrauterine pregnancies. Its incidence is low in natural conception but increases with assisted reproductive technologies, although it may still occur in spontaneous pregnancies. Diagnosis is challenging because the presence of an intrauterine pregnancy does not exclude a concurrent ectopic pregnancy, which still carries a risk of rupture and intra-abdominal bleeding.

Case: A 36-year-old woman, gravida 4 para 2 abortus 1, at approximately 7 weeks of gestation, presented with lower abdominal pain and vaginal bleeding. Ultrasonography revealed an intrauterine gestational sac without fetal cardiac activity (death conceptus) and an extrauterine gestational mass in the left adnexa suggestive of an ectopic pregnancy. Exploratory laparotomy revealed approximately 500 mL of hemoperitoneum and a hematosalpinx in the left fallopian tube. The patient was diagnosed with heterotopic pregnancy and underwent left salpingectomy followed by suction curettage. The postoperative condition was stable.

Discussion: Heterotopic pregnancy occurs due to simultaneous implantation of two embryos in different locations, with clinical manifestations that are often nonspecific, such as abdominal pain and vaginal bleeding. Diagnosis is primarily established through ultrasonography demonstrating the coexistence of an intrauterine pregnancy and an adnexal lesion. In this case, the presence of hemoperitoneum indicates significant involvement of the ectopic component, which may lead to serious complications if not promptly managed. The presence of an intrauterine pregnancy may delay recognition of the ectopic component, thereby increasing the risk of maternal morbidity.

Conclusion: Heterotopic pregnancy is a potentially life-threatening condition and should be considered in all first-trimester pregnancies presenting with abdominal pain and vaginal bleeding, even when an intrauterine pregnancy is identified. This case highlights the importance of comprehensive ultrasonographic evaluation and timely intervention to prevent complications and improve maternal outcomes.

Keywords: heterotopic pregnancy, ectopic pregnancy, death conceptus, hemoperitoneum, salpingectomy

**“Halal” Abortion in Perspective Common Law System, Civil Law System and IUS Constituendum:
Towards Legality and Safety**

Sardjana Nitidiningrat, Gulam Gumilar, Nuzma Anbia
Department of Obstetrics and Gynecology Syarif Hidayatullah State Islamic University

ABSTRACT

Background: To safe services in hygienic conditions must be made widely available and affordable, so that the stigma associated with providing and obtaining abortions can lessen and safe services can become normal and accepted, abortion is broadly legal, widely available and safe in Indonesia.

Objective: The purpose of this article to discuss ius constituendum on abortion in Indonesia from criminal law perspective between Common Law System and Civil Law System. In Indonesia Ius Constituendum on abortion is not directed to legalization of abortion as carried out both in Netherland and USA but tends to be harmonized with therapeutic abortion concept both medical and psychiatric fields.

Material and Method: Systematic review of studies evaluating the prevalence of unsafe abortion in Indonesia.

Results: The public health tragedy caused by unsafe abortion is all the more so because it is largely preventable, by improving the quality and availability of post abortion care, by making abortion legal and increasing access to safe services, and—because almost every abortion is preceded by an unintended pregnancy—by expanding access to contraceptive information and services. Restrictive laws have much less impact on stopping women from ending an unwanted pregnancy than on forcing those who are determined to do so to seek out clandestine means. Ironically, the abortion laws governing of Indonesia is holdovers from the colonial era.

Conclutions: “Halal” abortion is making a significant contribution toward reducing the need for abortion altogether and the likelihood of unsafe abortion by bringing down the rates of unintended pregnancy. This is also helping to reduce complications of unsafe abortion through its support for programs to increase access to and improve post abortion care. This includes not only treatment for septic or incomplete abortion, but also essential post abortion.

Keywords: “Halal” abortion, the public health tragedy, unintended pregnancy Common law system, Civil law system and Ius Constituendum.

Cervical Cancer Identification from Papsmear Images Based on Artificial Intelligence

Sardjana Nitidiningrat, Gulam Gumilar, Nuzma Anbia
Medical School Syarif Hidayatullah State Islamic University Jakarta

ABSTRACT

This research aims to implement the identification process for cervical cancer. This identification is achieved through feature extraction, which includes shape features and statistical features, subsequently processed using a developed artificial intelligence-based system. The methodology in this study involves clustering data using the Fuzzy C-Means (FCM) and K-Means algorithms into two clusters: Cluster 1 and Cluster 2. This is followed by a classification process utilizing the Backpropagation method to divide the data into two categories: normal cells and abnormal cells. The study utilized a total of 195 image data, consisting of 130 abnormal and 65 normal identified image data. Image processing begins with the image pre-processing stage to enhance the quality of the input images. Next, a segmentation process is performed to isolate the nucleus area (cell nucleus). A total of 11 features, composed of two types of features, were successfully extracted from the binary image of cervical cells. The results obtained from the training process indicate that the identification of cervical cancer through the combination of the FCM – Backpropagation method yields a superior accuracy value compared to using only the Backpropagation method, with accuracy values ranging from 100% to 97%. The optimal accuracy level of the classification system in this study is 84.44%. This optimal accuracy is achieved by setting specific parameter values: 10 neurons in the hidden layer and a learning rate of 0.2.

Keywords: Single cervical cell image, cervical cancer, pap smear test, fuzzy c-means, backpropagation

Rapidly Progressive Peripartum Cardiomyopathy with Concurrent Sepsis Leading to Fatal Outcome: A Case Report

Marisa Ummil Firdaus
Universitas Hang Tuah Surabaya

ABSTRACT

Introduction: Peripartum cardiomyopathy (PPCM) is a rare but potentially fatal cause of heart failure occurring in late pregnancy or the postpartum period. Its presentation may overlap with other cardiopulmonary conditions, complicating early diagnosis and management.

Case Illustration: A 40-year-old multiparous woman presented three days postpartum with acute dyspnea and severe hypoxemia. Initial evaluation suggested suspected PPCM with differential diagnoses of heart failure and pneumonia. Despite oxygen therapy, diuretics, and guideline-directed management, her condition rapidly deteriorated, requiring intubation and mechanical ventilation. The clinical course progressed to respiratory failure complicated by pneumonia, sepsis, septic shock, and multi-organ dysfunction. The patient ultimately developed bradycardia followed by asystole and was declared deceased.

Discussion: This case demonstrates a fulminant presentation of suspected PPCM with rapid deterioration exacerbated by infection and systemic inflammatory response. The coexistence of cardiac dysfunction and sepsis likely contributed synergistically to hemodynamic instability and poor outcome. Delayed presentation and overlapping clinical features may further complicate diagnosis and management in postpartum patients.

Conclusion: PPCM may present with severe and rapidly progressive complications, particularly when accompanied by infection. Early recognition, prompt evaluation, and comprehensive management are critical to improving patient outcomes.

Keywords: peripartum cardiomyopathy, postpartum, heart failure, sepsis, case report

Manajemen Holistik pada Remaja Disabilitas Intelektual dengan Riwayat Kekerasan Seksual: Pertimbangan Klinis, Etik, dan Hukum

M Radhiatul Hakiki¹, Shinta Prawitasari²

¹Residen Obstetri dan Ginekologi, Fakultas Kedokteran, Kesehatan Masyarakat dan Keperawatan, Universitas Gadjah Mada/RSUP dr. Sardjito, Yogyakarta, Indonesia.

²Konsultan Obstetri Ginekologi Sosial, Departemen Obsteri dan Ginekologi, Fakultas Kedokteran, Kesehatan Masyarakat dan Keperawatan, Universitas Gadjah Mada/RSUP dr. Sardjito, Yogyakarta, Indonesia.

Correspondence: mradhiatulhakiki28@gmail.com

ABSTRAK

Latar Belakang: Remaja disabilitas intelektual memiliki risiko kekerasan seksual 4–10 kali lebih tinggi dibandingkan populasi umum. Kerentanan ini meningkatkan risiko kehamilan yang tidak diinginkan serta berbagai dampak kesehatan reproduksi. Oleh karena itu, pemberian kontrasepsi pada kelompok ini memerlukan pertimbangan klinis, etik, dan hukum yang cermat, terutama mengingat sejarah praktik sterilisasi paksa pada individu dengan disabilitas intelektual serta pentingnya perlindungan hak reproduksi pasien.

Kasus: Seorang remaja perempuan POA1 berusia 16 tahun dengan disabilitas intelektual dan human immunodeficiency virus (HIV) dalam terapi antiretroviral rutin, dirujuk dari poli anak untuk konsultasi terkait kontrasepsi. Tiga bulan sebelum kunjungan, pasien mengalami kekerasan seksual yang menyebabkan kehamilan dan kemudian dilakukan terminasi kehamilan pada trimester pertama setelah melalui pertimbangan multidisiplin serta persetujuan wali. Saat dilakukan evaluasi di poli obstetri dan ginekologi, kondisi klinis pasien stabil dengan tanda vital dan pemeriksaan fisik dalam batas normal. Mengingat kerentanan pasien serta risiko kehamilan yang berulang, serta tidak ditemukan kontraindikasi terhadap penggunaan kontrasepsi hormonal dan dipilih metode kontrasepsi implan setelah dilakukan konseling kepada wali dan pasien sesuai dengan kapasitas kognitifnya.

Pembahasan: Secara klinis, kontrasepsi jangka panjang yang bersifat reversibel seperti implan, direkomendasikan pada remaja disabilitas intelektual karena memiliki efektivitas tinggi, bersifat reversibel, dan tidak memerlukan kepatuhan penggunaan harian. Dari perspektif etik, pemberian kontrasepsi pada kelompok rentan harus menyeimbangkan prinsip beneficence dan non-maleficence dengan penghormatan terhadap hak reproduksi pasien serta menghindari praktik yang bersifat pemaksaan. Dalam konteks hukum di Indonesia, tindakan medis pada remaja disabilitas intelektual harus dilakukan berdasarkan persetujuan wali dan berorientasi pada kepentingan terbaik pasien sebagaimana diatur dalam Undang-Undang No. 17 Tahun 2023 tentang Kesehatan, Undang-Undang No. 8 Tahun 2016 tentang Penyandang Disabilitas, serta Undang-Undang No. 35 Tahun 2014 tentang Perlindungan Anak.

Kesimpulan: Kontrasepsi jangka panjang yang bersifat reversibel dapat menjadi pilihan yang aman dan efektif pada remaja disabilitas intelektual yang rentan terhadap kekerasan seksual. Pemberian kontrasepsi harus dilakukan melalui pendekatan yang berpusat pada pasien dengan mempertimbangkan prinsip etik, persetujuan wali, serta kerangka hukum yang melindungi remaja penyandang disabilitas.

Kata Kunci: Disabilitas intelektual, kontrasepsi.

Socioeconomic Determinants of Mode of Delivery in Secondary Hospitals in Yogyakarta

Muhammad A'raaf¹, Keisha Athiyyawara Lyubiana¹, Irwan Taufiqur Rachman¹

¹Universitas Gadjah Mada

ABSTRACT

Background: The increasing rate of cesarean section (CS) is a global concern due to its impact on maternal and neonatal outcomes and healthcare resource utilization. Variations in CS rates across healthcare settings suggest that non-clinical factors, including socioeconomic status and institutional characteristics, may influence delivery decisions. In Indonesia, differences in hospital ownership and health financing schemes may contribute to these disparities. This study aims to examine the association between hospital type, insurance status, and mode of delivery in two secondary hospitals in Yogyakarta.

Methods: This analytic cross-sectional study used secondary data from 3,063 deliveries in two type C hospitals (one private and one government-owned) in Yogyakarta. The dependent variable was mode of delivery (vaginal delivery vs cesarean section). Independent variables included hospital type and insurance status (BPJS PBI, BPJS non-PBI, private insurance, mixed financing, and out-of-pocket). Bivariate analysis was performed using chi-square tests, followed by multivariate logistic regression. Results were reported as adjusted odds ratios (aOR) with 95% confidence intervals (CI).

Results and Discussion: Cesarean section rates were higher in private hospitals. Delivery in government hospitals was associated with significantly lower odds of CS (aOR 0.45; 95% CI 0.38–0.53; $p < 0.001$). Compared to BPJS PBI patients, higher odds of CS were observed in private insurance (aOR 3.28; 95% CI 1.63–6.60), BPJS non-PBI (aOR 5.85; 95% CI 4.33–7.90), mixed financing (aOR 2.06–4.06), and out-of-pocket patients (aOR 3.59; 95% CI 2.84–4.53) ($p < 0.01$). These findings indicate a clear socioeconomic gradient and institutional influence on delivery practices.

Conclusion: Hospital type and insurance status are significant determinants of mode of delivery. Strengthening clinical governance and ensuring equitable, evidence-based care are essential to reduce unnecessary cesarean sections.

Keywords: cesarean section, socioeconomic, insurance, hospital type, Yogyakarta

Robson Classification and Hospital Ownership as Determinants of Cesarean Section in Secondary Hospitals in Yogyakarta

Keisha Athiyyawara Lyubiana¹, Muhammad A'raaf¹, Irwan Taufiqur Rachman¹
¹Universitas Gadjah Mada

ABSTRACT

Background: Cesarean section (CS) rates vary across healthcare settings, reflecting differences in obstetric characteristics and institutional practices. The Robson classification provides a standardized method to assess and compare CS rates across populations. This study aimed to evaluate the association between hospital ownership and Robson classification groups with mode of delivery in secondary hospitals in Yogyakarta.

Methods: This analytic cross-sectional study used secondary data from deliveries in two type C hospitals (one private and one government-owned) in Yogyakarta. The dependent variable was mode of delivery (CS vs vaginal delivery). Independent variables included hospital ownership and Robson classification groups. For interpretation, Robson groups were categorized into low-risk (groups 1–4) and higher-risk (groups 5–10). Chi-square tests and multivariate logistic regression were performed, with results reported as adjusted odds ratios (aOR) and 95% confidence intervals (CI).

Results: Hospital ownership was significantly associated with mode of delivery, with government hospitals showing lower odds of CS compared to private hospitals (aOR 0.35; 95% CI 0.29–0.43; $p < 0.001$). Robson classification was also significantly associated with CS ($p < 0.001$). Higher odds were observed in higher-risk groups, particularly groups 6 (aOR 15.35; 95% CI 9.34–25.21) and 10 (aOR 15.18; 95% CI 6.34–36.32). Overall, CS was more frequent in higher-risk groups (5–10), while lower rates were observed in low-risk groups (1–4).

Conclusion: Hospital ownership and Robson classification significantly influence mode of delivery. Variations across institutions and CS occurrence in low-risk groups highlight the need for improved adherence to evidence-based obstetric care.

Keywords: Cesarean section; Robson classification; hospital ownership; mode of delivery; Yogyakarta

Laporan Kasus: Kejadian Eklamsi Akibat Keterlambatan Rujukan

Ranindita Maulya Ismah Amimah, Ajeng Normala, Ernawati
Universitas Tarumanagara

ABSTRAK

LATAR BELAKANG: Eklampsia merupakan komplikasi berat dari preeklampsia yang ditandai dengan kejang tonik–klonik generalisata tanpa adanya penyebab neurologis lain. Kondisi ini masih menjadi salah satu penyumbang utama kematian ibu di Indonesia dan sering dikaitkan dengan keterlambatan rujukan serta kurangnya deteksi dini yang adekuat.

LAPORAN KASUS: Seorang wanita berusia 33 tahun, gravida 4 para 3 abortus 0, usia kehamilan 40–41 minggu, datang ke instalasi gawat darurat dengan keluhan tiga kali kejang dalam beberapa jam sebelum masuk rumah sakit. Kejang disertai sakit kepala hebat, mual, muntah, dan gangguan penglihatan. Pasien memiliki riwayat hipertensi pada kehamilan sebelumnya. Pemeriksaan antenatal dilakukan sebanyak enam kali oleh bidan tanpa ditemukan komplikasi sebelumnya. Pada pemeriksaan fisik didapatkan tekanan darah 240/140 mmHg, frekuensi nadi 111 kali per menit, frekuensi napas 20 kali per menit, suhu 36,5°C, dan saturasi oksigen 98%. Pemeriksaan urinalisis menunjukkan proteinuria 4+, dan pemeriksaan laboratorium menunjukkan anemia ringan dengan jumlah trombosit dalam batas normal. Pasien didiagnosis eklampsia. Penatalaksanaan meliputi pemberian magnesium sulfat dan terapi antihipertensi, diikuti terminasi kehamilan melalui seksio sesarea. Bayi laki-laki lahir hidup dengan berat badan lahir 4030 gram dan skor Apgar 8 dan 9.

PEMBAHASAN: Secara patofisiologi, eklamsi dipicu oleh ketidakseimbangan faktor angiogenik yang menyebabkan disfungsi vaskular sistemik dan hipoperfusi organ, termasuk otak. Diagnosis ditegakkan berdasarkan hipertensi berat, proteinuria, serta manifestasi klinis khas. Penatalaksanaan berfokus pada stabilisasi maternal dengan magnesium sulfat sebagai terapi lini pertama, kontrol tekanan darah dengan obat antihipertensi, serta terminasi kehamilan sebagai terapi definitif. Intervensi yang cepat dan tepat sangat penting untuk mencegah komplikasi berat seperti sindrom HELLP, edema paru, kegagalan multiorgan, dan kematian ibu. Pencegahan dilakukan melalui peningkatan kualitas ANC, edukasi tanda bahaya kehamilan, serta sistem rujukan yang efektif. ANC minimal enam kali kunjungan penting untuk deteksi dini komplikasi. Keterlambatan rujukan yang dipengaruhi faktor sosial ekonomi, akses layanan, dan kualitas fasilitas kesehatan meningkatkan risiko kematian maternal. Keberhasilan penanganan bergantung pada pencegahan empat keterlambatan yaitu keterlambatan dalam mengenali kondisi, pengambilan keputusan, transportasi, dan penanganan di fasilitas kesehatan.

KESIMPULAN: Eklampsia merupakan kegawatdaruratan obstetri yang memerlukan penanganan segera. Deteksi dini melalui antenatal care yang adekuat, rujukan yang tepat waktu, serta edukasi mengenai tanda bahaya kehamilan sangat penting untuk menurunkan angka kematian ibu dan neonatal.

Kata kunci: Eklamsi, preeklamsi, kejang, hipertensi kehamilan

'Lantern on St. Paul's Dome': A Metaphor for Giant Cervical Myoma

Ninda Frymonalitza¹, Nastiti Hemas Mayangsari²

¹Obstetrics and Gynecology Residency Program, Universitas Riau

²Department of Obstetrics and Gynecology, Universitas Riau

ABSTRACT

Background: Cervical myoma is a rare subtype of uterine leiomyoma, accounting for less than 5% of all fibroids. Its location often leads to distortion of pelvic anatomy and presents significant diagnostic and surgical challenges, particularly because of its proximity to the urinary tract.

Case: A 52-year-old woman, gravida 3 para 1 abortus 2, presented with abnormal vaginal bleeding for 3 months, worsening over the last 10 days. The bleeding was profuse, requiring 8–9 pad changes per day, and was associated with weakness and nausea. Laboratory evaluation revealed severe anemia requiring multiple blood transfusions. Gynecological examination demonstrated a large, firm, well-circumscribed mass arising from the cervix and protruding into the vaginal canal. Ultrasonography revealed a hypoechoic cervical mass measuring 9.12 × 7.38 × 8.11 cm with a pseudocapsule and increased vascularity. The patient was diagnosed with abnormal uterine bleeding due to cervical myoma (AUB-L). Preoperative ureteric catheterization could not be performed due to compression and distortion of the urinary tract by the mass. The patient subsequently underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy with multidisciplinary support and without major complications.

Discussion: Large central cervical fibroids may produce the classical "Lantern on the dome of St. Paul's Cathedral" appearance, where the normal-sized uterus sits atop the enlarged cervical mass. This configuration significantly alters pelvic anatomy and increases the risk of intraoperative complications, particularly involving the bladder and ureters. Accurate preoperative assessment and meticulous surgical planning are essential to ensure safe management.

Conclusion: Giant cervical myoma is a rare but surgically challenging condition. Recognition of characteristic anatomical features and awareness that preventive measures such as ureteric catheterization may not always be feasible are crucial for optimal surgical planning and patient outcomes.

Keywords: cervical myoma, leiomyoma, abnormal uterine bleeding, hysterectomy

Strengthening Rural Referral Systems Through Early Ultrasound Detection of Placenta Accreta Spectrum: A Case Report in a Low-Resource Hospital

Faj'rian Haikal Faros¹, Alif Firdaus Wafa²

¹Medical Doctor Program, Faculty of Medicine, Islamic University of Indonesia/RSUD Dr. Soedono, Madiun, Indonesia

²Resident of Obstetrics and Gynecology, Faculty of Medicine, Universitas Airlangga/Dr. Soetomo General Academic Hospital, Surabaya, Indonesia

ABSTRACT

Background: Placenta Accreta Spectrum (PAS) is a life-threatening obstetric condition associated with massive hemorrhage and increased maternal mortality, particularly in low- resource and rural healthcare settings where access to multidisciplinary surgical teams and blood products is limited. Early antenatal detection using ultrasound is essential to enable timely referral and improve maternal-fetal outcomes.

Case: A 35-year-old woman, G2P1A0 at 29–30 weeks of gestation, was referred due to persistent antepartum bleeding. She had a previous cesarean section and comorbidities including chronic hypertension with superimposed preeclampsia, gestational diabetes mellitus, and class I obesity (BMI 30.9). Maternal vital signs were stable, NST was reactive, and spotting persisted. Ultrasound showed an anterior placenta completely covering the internal cervical os, consistent with placenta previa totalis. PAS markers were identified: loss of clear zone, bladder wall interruption, grade 3 lacunae, retroplacental hypervascularity, and feeding vessels. Estimated fetal weight was 1800 g with adequate amniotic fluid. She had received antenatal corticosteroids and was managed conservatively with tranexamic acid, antihypertensive therapy, insulin, and tocolysis. Due to strong suspicion of PAS, she was promptly referred to a tertiary center for definitive diagnosis and planned delivery management.

Discussion: This case highlights the importance of systematic PAS screening in placenta previa with prior cesarean delivery. Early recognition in rural hospitals supports timely referral and prevents catastrophic hemorrhage.

Conclusion: Early ultrasound detection of PAS in low-resource settings facilitates timely referral and reduces severe maternal complications.

Keywords: Placenta accreta spectrum; Placenta previa; Ultrasound; Rural hospital

Respiratory Distress in a Preterm Neonate Born to an Active-Smoking Mother with Premature Rupture of Membranes: A Case Report and Implications for Antenatal Risk Screening

Yudha Prasetyo Utomo MD¹, Ariesta Irbah Khairiah MD¹, Muhammad Reza Hidayat²

¹ Medical Doctor, RSU Raffa Majenang, Cilacap, Central Java

²Obstretic and Gynecology Departement, RSU Raffa Majenang, Cilacap, Central Java

ABSTRACT

Background: Neonatal respiratory distress is a frequent emergency, particularly in preterm infants, and contributes to increased morbidity and intensive care needs. It's etiology is multifactorial, involving pulmonary immaturity, impaired respiratory transition, and perinatal infection. Several antenatal and perinatal factors increase the risk, including prematurity, prolonged premature rupture of membranes (PROM), maternal anemia, and exposure to cigarette smoke during pregnancy. Tobacco exposure may impair placental perfusion, oxygen transfer, and fetal lung maturation. In addition, prolonged PROM raises the risk of infection, while maternal anemia may further compromise fetal oxygenation. Early identification of these combined clinical and social factors through integrated antenatal screening is essential for timely prevention and management.

Case: A preterm neonate was delivered at 34 weeks of gestation to a 21-year-old primigravida via cesarean section. The pregnancy was complicated by PROM for approximately five days and maternal anemia (hemoglobin 9.3 g/dL). The mother reported active smoking during the first trimester. She attended routine antenatal care and received supplementation. Shortly after birth, the neonate developed tachypnea with chest retractions. The infant was admitted to the NICU and treated with Continuous Positive Airway Pressure (CPAP), along with close monitoring and evaluation.

Discussion: Respiratory distress in this case likely reflects the interaction between prematurity, prolonged PROM, maternal anemia, and smoking exposure. These factors may collectively impair pulmonary adaptation and increase vulnerability to respiratory compromise. Despite adequate antenatal care, smoking remained a modifiable risk factor.

Conclusion: Neonatal respiratory distress may be influenced by both clinical and behavioral factors. Strengthening integrated antenatal care, including smoking cessation counseling and family support, may improve neonatal outcomes.

Keywords: respiratory distress, smoking during pregnancy, maternal anemia, social factors

Comparative Oncological Outcomes, Morbidity, and Patient Selection in Surgical Management of Vulvar Cancer: A Systematic Review

Ismi Aulia Azzahra, Daniel Saranga
Nasanapura Mother and Child Hospital, Palu, Indonesia

ABSTRACT

Background: Vulvar cancer is a relatively rare malignancy, accounting for approximately 3–5% of all gynecologic cancers, yet it carries significant morbidity and recurrence rates, with local recurrence reported in up to 25% of patients. Current trends emphasize surgical de-escalation, moving from radical vulvectomy and routine inguinofemoral lymphadenectomy (IFL) toward less extensive excision and selective nodal staging.

Methods: A PRISMA-guided scoping review of MEDLINE (PubMed), Embase, and Cochrane Library (2016–2026). Inclusion criteria were clinical studies evaluating surgical margins, sentinel lymph node biopsy, lymphadenectomy, or radiotherapy in vulvar cancer with reported oncologic outcomes. A total of 368 articles were identified, with 10 studies included after screening, and 3 key studies selected for focused analysis.

Results: Tumor-free margins <8 mm were associated with an increased risk of local recurrence (RR 1.99; 95% CI 1.13–3.51). Sentinel lymph node biopsy demonstrated high detection rates (~94%) and comparable recurrence and survival outcomes, including with scar injection, without increasing the risk of recurrence or death. In patients with sentinel node metastases, inguinofemoral radiotherapy resulted in low groin recurrence rates in micrometastases (≤ 2 mm; 1.6%) but significantly higher recurrence in macrometastases (> 2 mm; 22%). Lymphadenectomy provided better oncologic control in macrometastatic disease, while radiotherapy was associated with lower treatment-related morbidity.

Discussion: Nooij et al. emphasized the importance of adequate tumor-free margins in reducing local recurrence. Pascoal et al. demonstrated that sentinel lymph node biopsy, including scar injection techniques, maintains high detection rates and comparable oncologic outcomes with reduced morbidity. Meanwhile, Oonk et al. showed that radiotherapy may safely replace lymphadenectomy in micrometastatic disease but is insufficient in macrometastases, where surgical removal remains superior.

Keywords: vulvar cancer; radical vulvectomy; wide local excision; sentinel lymph node biopsy; inguinofemoral lymphadenectomy

Psychological Vulnerability and Pregnancy Loss: A Scoping Review of Maternal Mental Disorders and Spontaneous Abortion

Michelle Anabel¹, Adrian Desmar Pardomuan Ringo Ringo¹, Nabila Yasmin Dehan Perdania², Clara Angelina²

¹Medical Doctor, Faculty of Medicine, Universitas Brawijaya, East Java, Indonesia

²Medical Doctor, Faculty of Medicine, Atma Jaya Catholic University of Indonesia, DKI Jakarta, Indonesia

ABSTRACT

Background: Pregnancy loss often results in psychological morbidity, while the reverse pathway has received little attention. This issue is relevant among socially vulnerable populations, in whom psychiatric conditions often coexist. This scoping review aimed to map the existing evidence on the association between maternal mental disorders and spontaneous abortion.

Method: This scoping review followed PRISMA-ScR guidelines. Literature search was conducted using 6 major databases with relevant keywords related to maternal mental disorders and spontaneous abortion. Studies on DSM-5 psychiatric disorders were included, while those focused on substance withdrawal, pre-existing disorders before abortion, or maternal age ≥ 35 years were excluded. Eligible studies were screened, data were charted, and findings were summarized descriptively.

Results and Discussion: A total of 1,438 articles were identified, of which 15 met the eligibility criteria and were included in the final review. The studies were conducted across Asia, America, and Europe and involved women with pre-existing mental disorders, including schizophrenia, sleep disorders, bipolar disorder, and depression. Five studies reported that psychiatric disorders were independently and significantly associated with an increased risk of abortion, while other studies found that psychiatric medication use was associated with a significantly higher risk of abortion compared to controls. Mental disorders may increase the risk of spontaneous abortion through neuroendocrine and inflammatory mechanisms. Anxiety and depression, often correlated with socially vulnerable populations, are associated with HPA axis dysregulation and elevated cortisol, which may impair placental function and early pregnancy maintenance. Evidence from cohort and genetic studies supports a causal association between common mental disorders and miscarriage, while psychiatric medications may contribute, partly reflecting disease severity.

Conclusion: This review summarizes evidence across psychiatric conditions, suggesting that mental illness may contribute to abortion risk. Further research is needed to clarify mechanisms and account for confounders such as medication use and lifestyle factors.

Keywords: abortion; psychiatry; socially vulnerable population.

Missed Antenatal Care Leading to Late Detection of Multiple High-Risk Conditions in Pregnancy: A Case Report

Alfia Putri Aziza¹, Nadia Rencani², Nouva Afif Fernanda³, Alfaina Wahyuni⁴, I Nyoman Tritia Widianara⁵

^{1,2,3,4}Faculty of Medicine and Health Sciences, Muhammadiyah University of Yogyakarta

⁵Panembahan Senopati Regional Hospital of Bantul

^{1,2,3,4}Kampus Terpadu UMY, Gedung Siti Walidah Lt.3, Jl. Brawijaya, Tamantirto, Bantul, Yogyakarta, 55183

⁵Jl. Dr. Wahidin Sudiro Husodo, Tlirenggo, Bantul, Kabupaten Bantul, Daerah Istimewa Yogyakarta 55714

ABSTRACT

BACKGROUND: Antenatal care (ANC) plays a crucial role in the early detection and prevention of pregnancy-related complications, including hypertensive disorders and infectious diseases such as syphilis. Delayed or inadequate ANC may lead to missed opportunities in identifying high-risk conditions. Furthermore, the effectiveness of syphilis treatment initiated in late pregnancy in preventing congenital transmission remains uncertain.

CASE PRESENTATION: A 42-year-old multigravida woman (G3P2A0) presented at 36 weeks of gestation after attending only a single ANC visit. Clinical evaluation revealed severe preeclampsia, untreated maternal syphilis, grade II obesity, and transverse fetal lie. Syphilis treatment with benzathine penicillin G was initiated close to delivery. The pregnancy was terminated via cesarean section, resulting in a healthy female neonate with no clinical signs of congenital syphilis at initial evaluation.

DISCUSSION: This case highlights how delayed ANC contributes to late detection of multiple high-risk conditions in pregnancy. Although late initiation of syphilis treatment may provide partial protection against vertical transmission, its effectiveness is likely inferior to early treatment. Additionally, this case underscores gaps in clinical practice and healthcare access, particularly in screening and early detection among patients with limited ANC utilization.

CONCLUSION: Delayed antenatal care can significantly impact maternal and neonatal outcomes by postponing diagnosis and intervention. Early detection through adequate ANC remains essential, while cases with late presentation require careful management to minimize adverse outcomes.

Keywords: Antenatal care, Late diagnosis, Syphilis in pregnancy, Severe Preeclampsia, Case report

Severe Maternal Hypokalemia Mimicking Fetal Distress: A Case of Reversible Fetal Bradycardia with Suspected Rhabdomyolysis

Juan Ortega Putra¹, Fionna Felicia², Brillian Segala Putra², Munawar Latif³

¹General Practitioner, Pulang Pisau Regional General Hospital, Central Kalimantan, Indonesia

²Department of Obstetrics and Gynecology, Pulang Pisau Regional General Hospital, Central Kalimantan, Indonesia

³Department of Internal Medicine, Pulang Pisau Regional General Hospital, Central Kalimantan, Indonesia

ABSTRACT

Introduction: Severe hypokalemia during pregnancy is uncommon but may lead to significant maternal and fetal complications. Fetal bradycardia is often interpreted as a sign of fetal distress, although maternal metabolic disturbances may represent a reversible cause.

Case Illustration: A 44-year-old primigravida at 33–34 weeks of gestation presented with progressive weakness, myalgia, and dark urine. Laboratory evaluation revealed severe hypokalemia (1.51 mEq/L) and elevated transaminases (SGOT/SGPT 278/193 U/L). Electrocardiography showed T-wave flattening, ST depression, and U waves. Obstetric ultrasonography demonstrated fetal bradycardia (101 bpm). Primary hepatic and autoimmune causes were considered less likely based on clinical and imaging findings. Following intravenous and oral potassium replacement, serum potassium improved to 4.17 mEq/L, accompanied by resolution of symptoms, normalization of liver enzymes, and recovery of fetal heart rate within 24 hours. The pregnancy was continued to 37–38 weeks, resulting in delivery of a vigorous neonate.

Discussion: This case highlights a reversible maternal–fetal interaction in which severe hypokalemia contributed to fetal bradycardia and transaminitis suspected secondary to rhabdomyolysis. Recognition of this metabolic etiology is essential to avoid misinterpretation as fetal distress and prevent unnecessary intervention.

Conclusion: Maternal hypokalemia should be considered in the differential diagnosis of fetal bradycardia, as prompt correction may lead to favorable maternal and fetal outcomes.

Keywords: fetal bradycardia; hypokalemia; pregnancy; rhabdomyolysis; transaminitis

The Double Burden in Pregnancy: Rheumatoid Arthritis-Associated Placental Insufficiency Leading to Fetal Growth Restriction with Brain-Sparing and AEDV—A Case Report

Faj'rian Haikal Faros¹, Alif Firdaus Wafa²

¹Medical Doctor Program, Faculty of Medicine, Islamic University of Indonesia/RSUD Dr. Soedono, Madiun, Indonesia

²Resident of Obstetrics and Gynecology, Faculty of Medicine, Universitas Airlangga/Dr. Soetomo General Academic Hospital, Surabaya, Indonesia

ABSTRACT

Background: Rheumatoid arthritis (RA) is a chronic autoimmune inflammatory disease that may contribute to placental dysfunction and adverse pregnancy outcomes. In the context of the “double burden” of chronic disease and obstetric complications, early detection of fetal compromise through integrated antenatal surveillance is crucial to reduce maternal and neonatal morbidity.

Case: A 30-year-old multigravida (GII P1001) at 35–36 weeks gestation presented with decreased fetal movement for three days. She had RA diagnosed in 2023 and previously received methotrexate, which was discontinued before conception and replaced with azathioprine (Imuran) 50 mg daily. Obstetric evaluation revealed transverse lie with the fetal head on the left. Fetal monitoring showed recurrent abnormal non-stress test (NST) category II with low variability. Ultrasound and Doppler confirmed FGR with estimated fetal weight 2200 g, brain-sparing effect, and absent end-diastolic velocity (AEDV) without reversed flow. A single intramuscular dose of dexamethasone 6 mg was administered for fetal lung maturation. Emergency cesarean section was performed. A male neonate was delivered weighing 2065 g, length 45 cm, Apgar scores 4 and 7, requiring CPAP support. Maternal recovery was stable.

Discussion: Chronic inflammation in RA may impair uteroplacental circulation, leading to hypoxia and growth restriction. AEDV and brain-sparing effect indicate severe placental insufficiency requiring timely delivery.

Conclusion: RA in pregnancy may cause severe FGR with abnormal fetal surveillance. Doppler-guided management and prompt intervention are critical.

Keywords: rheumatoid arthritis, fetal growth restriction, Doppler, AEDV

Hasil Skrining HPV Tipe 16 dan 18 serta Kolposkopi sebagai Prediktor Lesi Prakanker Serviks Derajat Tinggi: Implikasi untuk Triase pada Sistem Rujukan

dr. Bagus Indra Cahya¹, Dr. dr. Moh. Nailul Fahmi, Sp.O.G., Subsp. Onk¹

¹Departemen Obstetri dan Ginekologi, Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan, Universitas Gadjah Mada

ABSTRAK

Latar Belakang: Kanker serviks masih menjadi salah satu masalah kesehatan di Indonesia. Skrining berbasis HPV, khususnya tipe 16 dan 18, serta kolposkopi berperan penting dalam deteksi dini lesi prakanker serviks. Dalam sistem rujukan, rumah sakit tersier menghadapi potensi beban rujukan yang tinggi, termasuk pada pasien dengan risiko rendah yang dapat dilakukan penanganan di RS tingkat sekunder. Oleh karena itu, diperlukan diperlukan strategi triase yang efektif dalam sistem rujukan untuk mengidentifikasi pasien dengan risiko tinggi secara lebih akurat.

Metode: Penelitian ini merupakan studi analitik observasional dengan desain potong lintang pada pasien lesi prakanker serviks yang menjalani tindakan eksisi di RS Sardjito. Variabel yang dianalisis meliputi hasil skrining HPV tipe 16 dan 18, temuan kolposkopi, serta derajat lesi histopatologi (lesi derajat tinggi vs lesi derajat rendah). Analisis dilakukan secara deskriptif, bivariat menggunakan uji chi-square, dan multivariat menggunakan regresi logistik.

Hasil dan Diskusi: Dari 100 pasien, 22% merupakan lesi derajat tinggi dan 65% derajat rendah. Infeksi HPV tipe 16 dan 18 lebih tinggi pada lesi derajat tinggi dibandingkan derajat rendah (68,2% vs 30,8%) dengan peningkatan risiko hampir lima kali lipat (OR 4,82). Kolposkopi positif juga lebih dominan pada lesi derajat tinggi (95,5% vs 61,5%) dan meningkatkan risiko secara signifikan (OR 13,1; $p < 0,001$). Analisis multivariat menunjukkan bahwa kolposkopi positif merupakan prediktor independen terkuat (aOR 11,2; 95% CI 1,4–89,5; $p = 0,023$), diikuti oleh HPV tipe 16 dan 18 (aOR 3,9; 95% CI 1,4–10,8; $p = 0,009$). Temuan ini menunjukkan bahwa kombinasi skrining HPV tipe 16 dan 18 serta kolposkopi dapat digunakan sebagai strategi triase berbasis risiko untuk mengidentifikasi lesi derajat tinggi secara lebih akurat. Pendekatan ini berpotensi menjadi dasar seleksi rujukan yang lebih efektif, sehingga dapat mengurangi beban rujukan di rumah sakit tersier.

Kesimpulan: Hasil skrining HPV tipe 16 dan 18 serta kolposkopi merupakan prediktor independen terhadap lesi prakanker serviks derajat tinggi, dengan kolposkopi sebagai faktor terkuat. Kombinasi keduanya direkomendasikan sebagai strategi triase untuk menentukan kebutuhan rujukan ke fasilitas tersier.

Kata Kunci: HPV tipe 16 dan 18, kolposkopi, lesi prakanker serviks, triase, sistem rujukan

VBAC yang Tidak Direncanakan pada Suspek PAS: Sebuah Pelajaran tentang Kewaspadaan dan Kesiapan Kegawatdaruratan

dr. Dinar Sandi Aji¹, dr. Irwan Taufiqur Rahman, Sp.O.G., Subsp. K.F.M.¹

¹Departemen Obstetri dan Ginekologi, Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan (FKKMK), Universitas Gadjah Mada, Yogyakarta, Indonesia

ABSTRAK

Latar Belakang: Placenta Accreta Spectrum (PAS) merupakan kegawatdaruratan obstetri dengan tingkat morbiditas dan mortalitas maternal yang signifikan, utamanya berkorelasi dengan riwayat pembentukan parut uterus pasca-seksio sesarea. Konsensus tata laksana standar merekomendasikan terminasi kehamilan elektif melalui seksio sesarea yang dilanjutkan dengan histerektomi peripartum sebelum onset persalinan. Insidensi persalinan pervaginam yang tidak terencana (unplanned Vaginal Birth After Cesarean / VBAC) pada kecurigaan PAS merupakan skenario klinis atipikal yang mengancam nyawa, berisiko memicu perdarahan katastrofik, dan menuntut kesiagaan tim multidisiplin yang komprehensif.

Ilustrasi Kasus: Dilaporkan kasus seorang perempuan berusia 35 tahun (G3P2A0), usia gestasi 28 minggu 4 hari, dengan riwayat seksio sesarea dan kecurigaan PAS, yang dirujuk ke fasilitas tersier atas indikasi Preterm Premature Rupture of Membranes (PPROM) dengan manajemen ekspektan selama 8 hari. Pasien tiba di Instalasi Gawat Darurat (IGD) dalam kondisi inpartu kala II yang berujung pada persalinan presipitatus pervaginam. Pasca-persalinan, pasien mengalami retensio plasenta yang memicu Postpartum Hemorrhage (PPH) dini (estimasi perdarahan 1065 cc) dan jatuh ke dalam manifestasi klinis syok hipovolemik derajat II. Protokol damage control segera diinisiasi melalui resusitasi cairan masif, penghindaran ekstraksi plasenta manual, dan dilanjutkan dengan tindakan histerektomi peripartum emergensi. Stabilisasi hemodinamik berhasil dicapai pasca-operatif, maternal dan neonatus prematur (BBL 1215 gram, skor Apgar 7/8/8) sintas tanpa komplikasi lanjutan yang bermakna.

Kesimpulan: Kasus Maternal Near-Miss ini menegaskan krusialnya kewaspadaan klinis (clinical vigilance) dalam menentukan batas toleransi manajemen konservatif PPRM pada pasien dengan penyulit PAS. Perpanjangan manajemen ekspektan pada kasus ini terbukti meningkatkan risiko terjadinya persalinan spontan presipitatus. Optimalisasi sistem rujukan terintegrasi dan kesiapan fasilitas pelayanan kesehatan tingkat lanjut (emergency readiness) dalam melakukan intervensi bedah damage control menjadi determinan utama dalam menyelamatkan nyawa maternal pada komplikasi penyimpangan klinis ekstrem berupa unplanned VBAC.

Kata kunci: Plasenta Akreta; VBAC; Ketuban Pecah Dini Preterm; Near-Miss Maternal; Histerektomi Peripartum; Sistem Rujukan.

The HBV-Positive Surgeon: A Bioethical Analysis of Disclosure, Patient Safety, and Professional Rights

Nisa Utami Ika Permatasari¹, Agung Dewanto¹, Eugenius Phywai Ganap¹

¹Department of Obstetrics and Gynecology, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada

ABSTRACT

Background: Hepatitis B virus (HBV) infection among healthcare workers, particularly surgeons poses a complex ethical dilemma involving patient safety and physicians' professional rights. Cases of HBV transmission from surgeons to patients during operative procedures have been documented in the literature, even in procedures considered low-risk, raising fundamental questions about disclosure obligations and the doctor-patient contract.

Objective: To analyze the ethical dilemma faced by HBV-positive physicians in surgical practice, to examine disclosure obligations through the lens of the four bioethical principles (beneficence, non-maleficence, autonomy, justice), and to review relevant national and international policies.

Methods: A narrative literature review was conducted covering case studies, international clinical guidelines (CDC, AMA 2004, NFS 2018), and Indonesian national regulations (Permenkes No. 27/2017; Permenkes No. 53/2015) pertaining to infected healthcare workers and clinical practice.

Results: The risk of HBV transmission from physician to patient ranges from 6–13% in cardiothoracic procedures to up to 9% in gynecological procedures. Surgeons with HBsAg-positive, HBeAg-positive status and high viral load can transmit HBV even during low-risk procedures. The principles of beneficence and non-maleficence support restriction of exposure-prone procedures (EPP) in high-risk cases, while the principle of patient autonomy demands adequate informed consent. International guidelines permit physicians with HBV to continue practicing provided that viral load is controlled (<1,000 IU/mL), double gloving is applied, and oversight by an expert panel is in place. Indonesia currently lacks explicit regulation governing physicians' disclosure obligations regarding HBV status.

Conclusion: The absence of HBV status disclosure by a physician does not automatically constitute a breach of the doctor-patient contract. However, it may violate the bioethical principles of autonomy and beneficence when viral load is high and risky procedures are performed without informed consent. The establishment of expert panels, standardized HBV screening for surgical staff, and strengthened national regulations are the principal recommendations.

Keywords: Hepatitis B in healthcare worker, bioethics, doctor-patient contract, exposure-prone procedures

Junior Resident Doctors' Experience in Clinical Decision-Making: When Evidence Based Medicine Evaded by Expert Opinions

Inge Nandya Hertapanndika¹, Agung Dewanto^{1,2}, Eugenius Phywai Ganap^{1,2}

¹Department of Obstetrics and Gynecology, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, 55281, Yogyakarta, Indonesia.

²Department of Obstetrics and Gynecology, Dr. Sardjito Hospital, 55281, Yogyakarta, Indonesia.

ABSTRACT

Introduction: Junior doctors often encounter challenges when making clinical decisions. Frequently, their decisions rely more on expert opinions than on evidence-based medicine (EBM). This reliance can lead to various dilemmas, particularly concerning their dual roles as doctors and students.

Methods: This is a literature review that explores residents' experiences in clinical decision-making through case illustrations, bioethical analyses, and insights from research on EBM culture.

Discussion: A case example of a second-year junior resident facing dilemma when a primigravida patient underwent caesarean section without indication. What should the resident have done, and what stance should the Doctor in Charge have taken? From 2011-2014, six suspected cases of medical malpractice in the Central Java Region. Professional associations, such as the Indonesian Doctors Association (IDI) and the Code of Medical Ethics (KODEKI), have established standards that doctors must follow. Factors such as low confidence, inadequate skills, senior influence, and a weak culture of EBM practice significantly impact residents' decision-making. Expert opinion often bridges evidence gaps and clarifies ambiguous cases, underscoring its role in guideline development. Even though expert opinions are regarded as the least trustworthy in the evidence hierarchy, research in 2012 shows that people in Indonesia (66.4%) and Japan (92.5%) rely significantly on senior guidance rather than scientific evidence. In fact, EBM also describes how to operate in a clinical setting that relies on asking the right questions, gathering literature, evaluating validity, and applying the latest best evidence in practice. Djulbegovic et al. (2019) assert that evidence never stands alone but always requires interpretation when balance between beneficial and harmful effects is very delicate.

Conclusion: EBM should become more than just a slogan. Improving EBM education and ethical reasoning were crucial not only for residents but also for the Doctor in Charge. Promoting future fundamental research on clinical reasoning is essential for facing the dilemmas.

Keywords: Clinical decision-making; evidence-based medicine; expert opinion; medical ethics; and ethical dilemma

Hubungan Pijat Perut Tradisional pada Kehamilan Trimester Lanjut dengan Risiko Solusio Plasenta dan Kematian Janin Intrauterin: Systematic Review

Yoshilda Marisa Manafe, Sena Putra, Ngurah Deva
RS UKI

ABSTRAK

Latar Belakang: Pijat perut tradisional pada ibu hamil masih banyak dilakukan sebagai bagian dari praktik budaya oleh dukun (traditional birth attendant). Meskipun dipercaya memberikan manfaat, manipulasi abdomen pada kehamilan trimester lanjut berpotensi menyebabkan trauma uterus yang dapat memicu komplikasi serius seperti solusio plasenta dan kematian janin intrauterin (intrauterine fetal death / IUFD). Bukti ilmiah mengenai hubungan ini masih terbatas dan belum tersintesis secara sistematis. Penelitian ini bertujuan untuk menilai hubungan antara pijat perut tradisional pada kehamilan trimester lanjut dengan risiko solusio plasenta dan kematian janin intrauterin (IUFD).

Metode: Systematic review dengan pendekatan naratif dilakukan melalui pencarian literatur pada PubMed, Scopus, dan Web of Science untuk studi yang dipublikasikan antara tahun 2000–2025. Kriteria inklusi meliputi studi observasional pada ibu hamil trimester 2–3 yang terpapar pijat perut tradisional oleh dukun, dengan outcome solusio plasenta dan/atau IUFD. Seleksi studi dilakukan oleh dua reviewer independen berdasarkan pedoman PRISMA. Penilaian kualitas menggunakan Newcastle-Ottawa Scale, dan data disintesis secara deskriptif.

Hasil Diskusi: Sejumlah studi menunjukkan adanya kecenderungan peningkatan kejadian solusio plasenta, serta risiko IUFD pada ibu hamil yang menjalani pijat perut tradisional pada beberapa studi observasional. Laporan kasus juga mendukung hubungan dengan komplikasi obstetri fatal. Secara biologis, praktik ini dapat menyebabkan trauma mekanik pada uterus yang memicu disrupsi vaskular plasenta dan berujung pada solusio plasenta, yang merupakan salah satu penyebab utama IUFD. Variasi desain studi dan keterbatasan kualitas bukti masih menjadi tantangan dalam interpretasi hasil.

Kesimpulan: Pijat perut tradisional pada kehamilan trimester lanjut berpotensi meningkatkan risiko solusio plasenta dan IUFD. Praktik ini dapat dikategorikan sebagai faktor risiko yang dapat dicegah (preventable risk factor), sehingga diperlukan edukasi masyarakat untuk meningkatkan keselamatan maternal dan fetal.

Kata kunci: pijat tradisional, kehamilan trimester lanjut, solusio plasenta, IUFD, traditional birth attendant

Obstetric Risks, Unintended Pregnancy, and High-Risk Pregnancy Literacy in Adolescent and Reproductive-Age Pregnancies at RSUD Ulin: A Comparative Analysis

Sonya YR Rajagukguk¹, Renny Aditya²

¹Obstetric and Gynecology Residency Programme -1;

²Obstetric and Gynecology Departement, Obstetrics and Gynecology Social Division
Lambung Mangkurat University – Ulin Hospital - Banjarmasin

Banjarmasin – South Borneo

Correspondence: sonyaradjagukguk@gmail.com

082248473907

ABSTRACT

Background: Adolescent pregnancy remains a major reproductive health concern in Indonesia, especially in South Kalimantan, due to its association with increased maternal and neonatal complications. RSUD Ulin, as a tertiary referral hospital. These factors can negatively impact maternal and neonatal outcomes.

Methods: This study utilized an analytical observational design with a cross-sectional approach, incorporating both primary and secondary data from medical records of mothers who delivered at RSUD Ulin. One hundred pregnant women were selected through purposive sampling and divided into two groups: those aged <19 years and those aged 19–34 years. Data analysis included univariate and bivariate methods using independent t-tests, with statistical significance set at $p < 0.05$.

Results: Mothers aged <19 years were predominantly of lower educational level and primiparous, and more frequently experienced high-risk conditions such as potential and actual obstetric emergencies (APGO, AGO, and AGDO) ($p = 0.000$). Timely referrals were more common in this group, whereas planned early referrals predominated among women aged 19–34 years ($p = 0.022$). Vaginal delivery was more frequent among adolescents, while cesarean delivery was more common in the 19–34 years group ($p = 0.000$). Neonates of adolescent mothers were more likely to have no asphyxia but were more frequently small for gestational age, whereas those in the older group were predominantly appropriate for gestational age ($p = 0.000$). Socially, adolescent mothers were more likely to have low socioeconomic status and a family history of adolescent pregnancy ($p = 0.000$). No significant differences were found in maternal outcomes and unintended pregnancy; however, significant differences were observed in knowledge of high-risk pregnancy ($p = 0.000$).

Conclusion: Adolescent pregnancy represents a high-risk group with significant social and clinical differences and is associated with less optimal neonatal outcomes. Strengthening reproductive health education among adolescents is essential to prevent early pregnancy and improve awareness of high-risk pregnancy. Enhancing the quality of antenatal care and the role of family support is also crucial.

Keywords: adolescent pregnancy, obstetric risk, maternal outcomes, pregnancy literacy

Comparison of the Effects of Intrauterine and Rectal Misoprostol Combined with Oxytocin Versus Oxytocin Alone on Postpartum Hemorrhage: A Systematic Review and Meta-Analysis

Novita Putri¹, Celine Grace Sita²

¹General Practitioner, RSIA Mutiara Putri, Bandar Lampung, Lampung.

²General Practitioner, RS Imanuel Way Halim, Bandar Lampung, Lampung.

ABSTRACT

Background: Postpartum hemorrhage (PPH) remains the foremost cause of maternal mortality worldwide, responsible for an estimated 70,000 deaths annually and disproportionately affecting low- and middle-income countries (LMICs). Oxytocin is the cornerstone uterotonic agent for active management of the third stage of labor; however, its efficacy is constrained by cold-chain requirements, intravenous administration, and tachyphylaxis. Misoprostol, a thermostable prostaglandin E1 analogue, has been evaluated as an adjunct to oxytocin via multiple routes including intrauterine and rectal administration. Despite several individual randomized controlled trials (RCTs), no comprehensive systematic review has synthesized evidence specifically comparing intrauterine and rectal misoprostol in combination with oxytocin against oxytocin monotherapy for PPH prevention.

Methods: We conducted a systematic search of MEDLINE (PubMed), Embase, Cochrane Central Register of Controlled Trials (CENTRAL), Scopus, ClinicalTrials.gov, and WHO ICTRP from inception to September 2024. RCTs enrolling women undergoing vaginal delivery who received intrauterine or rectal misoprostol combined with oxytocin compared to oxytocin alone were eligible. Two independent reviewers performed screening, data extraction, and quality assessment using the Cochrane Risk of Bias 2.0 tool (RoB 2). Pooled estimates were derived using random-effects models (DerSimonian-Laird). The primary outcomes were mean postpartum blood loss and PPH incidence (blood loss ≥ 500 mL). Heterogeneity was assessed using I² and Cochran's Q statistics. Publication bias was evaluated with Egger's test and funnel plot asymmetry. The GRADE framework was applied to assess certainty of evidence.

Results: Eighteen RCTs involving 5,482 participants met inclusion criteria (intrauterine misoprostol: 8 trials, n=2,264; rectal misoprostol: 10 trials, n=3,218; with overlap in two multi-arm trials). Compared to oxytocin alone, intrauterine misoprostol combined with oxytocin significantly reduced mean blood loss (mean difference [MD]: -78.4 mL; 95% CI: -96.2 to -60.6; I²=42%; p<0.001) and PPH incidence (risk ratio [RR]: 0.38; 95% CI: 0.27-0.53; p<0.001). Rectal misoprostol combined with oxytocin also reduced mean blood loss (MD: -62.1 mL; 95% CI: -77.8 to -46.4; I²=51%; p<0.001) and PPH incidence (RR: 0.51; 95% CI: 0.39-0.66; p<0.001). In direct comparison, intrauterine combination showed superior blood loss reduction over rectal combination (MD: -16.3 mL; 95% CI: -29.7 to -2.9; p=0.017). Both combination regimens significantly reduced requirements for additional uterotonics and blood transfusion. Misoprostol-containing regimens were associated with higher rates of shivering and pyrexia, which were transient and self-limiting. GRADE certainty ranged from moderate to high for primary outcomes.

Conclusions: Misoprostol combined with oxytocin, whether administered intracavitarily or rectally, significantly reduces postpartum blood loss and PPH incidence compared to oxytocin alone, with intrauterine administration demonstrating incremental superiority. These findings support the integration of adjunctive misoprostol into active management of the third stage of labor, particularly in high-risk obstetric settings and resource-limited environments. Further high-quality trials are required to establish optimal dosing and long-term safety profiles.

Keywords: postpartum hemorrhage; oxytocin; misoprostol intrauterine; misoprostol rectal; uterotonic.

From Inequality to Mortality: The Impact of Socioeconomic Disparities on Maternal Mortality — A Systematic Review

Jacobus Jenő Wibisono^{1,2}, Angelica Utomo², Christina Valeria Sie²

¹ Department of Obstetrics and Gynecology, Siloam Hospitals Lippo Village, Indonesia, Banten, Tangerang

² Faculty of Medicine, Pelita Harapan University, Indonesia, Banten, Tangerang

ABSTRACT

Background: Maternal mortality remains a significant global health concern that does not affect all women equally. Women from low socioeconomic status (SES) are consistently at greater risk of death during or after pregnancy, largely due to limited access to healthcare, unequal distribution of resources, and poor living conditions shaped by broader social determinants of health.

Methods: A systematic review was conducted using peer-reviewed studies retrieved from PubMed and Google Scholar. The search included cohort, cross-sectional, and ecological studies investigating the relationship between socioeconomic disparities and maternal mortality. Key variables assessed included income level, educational attainment, geographic location, and access to healthcare services. Articles were screened based on predefined inclusion and exclusion criteria, and relevant data were extracted for qualitative synthesis.

Results and Discussion: The findings consistently indicate that women with lower socioeconomic status face substantially higher risks of maternal death. Low-income women were more than twice as likely to die within six weeks postpartum (RR 2.42), with elevated risk persisting at one year (RR 1.83). Residing in economically deprived neighbourhoods further increased the odds of severe maternal complications (aOR 1.78). Access to antenatal care and institutional delivery remained strongly associated with income and education level, with women of lower socioeconomic status receiving significantly less care. Women of higher socioeconomic status experienced better pregnancy outcomes overall, including lower rates of preeclampsia and preterm birth. Notably, disparities between groups have continued to widen in several settings over time.

Conclusion: Socioeconomic disparities are a critical determinant of maternal mortality globally. Poverty limits access to care and increases exposure to health risks. Addressing this issue requires targeted action on the root causes of inequality, alongside efforts to improve healthcare access and strengthen health systems that serve all women equitably.

Keywords: Maternal mortality; socioeconomic status; health disparities; maternal health; social determinants

When Miscarriage is Not a Miscarriage: Diagnostic Challenge of Cesarean Scar Pregnancy in First Trimester Bleeding

Gita Khairiyah Arifin¹, Desy Handayani²

Faculty of Medicine, Universitas of Muhammadiyah North Sumatra
Obstetric and Gynecology, RSUD Drs H Amri Tambunan

ABSTRACT

Background: Cesarean scar pregnancy (CSP) is a rare but potentially life-threatening ectopic pregnancy due to the risk of uterine rupture and massive hemorrhage. Its clinical presentation often mimics miscarriage in the first trimester, leading to frequent misdiagnosis. Early diagnosis is essential to guide appropriate management.

Case: A 29-year-old woman, gravida 3 para 2 abortus 0, with a history of 2 previous cesarean sections, presented with vaginal bleeding for one day. It initially appeared as brownish spotting, then progressed to blood clots resembling menstruation without tissue passage. The symptoms were accompanied by nausea, vomiting, and intermittent lower abdominal pain. A pregnancy test was positive, with an estimated gestational age of 5–6 weeks. Ultrasound revealed an empty uterine cavity with a gestational sac implanted in the anterior lower uterine segment at the previous cesarean scar, bulging toward the serosa, with residual myometrial thickness of approximately 4 mm. These findings were consistent with grade 3 CSP with an exogenic growth pattern. The patient underwent hysterotomy, evacuation of conception products, hysterorrhaphy, and intrauterine balloon tamponade. The postoperative condition was stable, with no active bleeding and controlled pain.

Discussion: CSP is frequently misdiagnosed as miscarriage due to similar clinical features. Diagnosis relies on identifying implantation at the cesarean scar, empty uterine cavity, and thin myometrium. Misdiagnosis may lead to inappropriate management and serious complications.

Conclusion: CSP should be considered in first trimester bleeding with a history of cesarean delivery. Early recognition using clinical and ultrasound findings is crucial to ensure intervention and prevent life-threatening complications.

Keywords: cesarean scar pregnancy, early diagnosis, first trimester bleeding, ectopic pregnancy

Delayed Diagnosis of Imperforate Hymen Presenting with Urinary Symptoms and Abdominal Distension in an Adolescent: A Case Report

Imperforate Hymen Mimicking Urinary Tract Pathology: A Delayed Diagnosis with Abdominal Mass in an Adolescent

Hilda Fachryza, Gusfrizer, Aida
RSUD Puri Husada, Tembilahan, Riau

ABSTRACT

Introduction: Imperforate hymen is the most common congenital anomaly of the female genital tract and typically presents at puberty with primary amenorrhea and cyclic abdominal pain. However, atypical presentations may occur and lead to delayed diagnosis.

Case Illustration: A 12-year-old girl presented with persistent pain during urination and had not yet experienced menarche. She reported intermittent lower abdominal pain for several months, accompanied by progressive abdominal enlargement. Ten days prior to admission, the pain worsened and radiated to the left back, with increasing abdominal distension. Physical examination revealed suprapubic to umbilical abdominal enlargement. Gynecological examination showed a reddish, bulging hymen completely covering the vaginal introitus. Ultrasonography demonstrated hematometra and hematocolpos.

Discussion: This case illustrates a delayed diagnosis of imperforate hymen presenting with urinary symptoms and abdominal mass effect. Accumulation of menstrual blood may compress adjacent urinary structures, leading to dysuria and mimicking urinary tract pathology. Such atypical presentations may obscure the diagnosis, particularly in settings where initial evaluation does not include genital examination.

Conclusion: Imperforate hymen should be considered in adolescents with urinary complaints and primary amenorrhea. Early recognition through careful clinical evaluation is crucial to prevent complications associated with delayed diagnosis.

Keywords: imperforate hymen; hematocolpos; hematometra; primary amenorrhea; adolescent

Amniotic Fluid Embolism during Cesarean Section: A Case Report with Ethical Consideration

Suila Sitanggang, Shalma Alaika Aurel Balqis
RSU Bunda Mulia Post Graduated Medical Doctor, Faculty of Medicine
Universitas Padjadjaran

ABSTRACT

Background: Amniotic Fluid Embolism (AFE) is rare but life-threatening obstetric emergency caused by the entry of amniotic fluid into the maternal circulation, triggering an anaphylactoid reaction. Despite its low incidence, AFE carries high mortality rate, reported to be around 20–60%, making it one of the leading causes of maternal death. Due to its sudden onset and difficulty in diagnosis, AFE is often associated with medicolegal challenges. In such cases, clear informed consent and medical documentation are essential to reduce the risk of legal disputes.

Case Presentation: A 22-year old primigravid, referred to our institution at full-term with no signs of labor. Patient was planned cesarean section due to cephalopelvic disproportion. Vital sign within normal, and no comorbidities. Informed consent was obtained before surgery to the patient and family about indication, procedure, anesthesia, and possible risk such as death. However, during procedure patient suddenly seizure, hypotension and no palpable pulse. The patient's husband was called to operating room. Cardiopulmonary resuscitation was initiated. The patient was pronounced dead at 10.50. The clinical presentation raised suspect AFE without previous warning signs.

Discussion: Informed consent is key in obstetric case, especially cesarean section that life threatening complications may occur. AFE is unpreventable, which highlights the need for clear communication to the patient and her family. It should be viewed not only as signed document but as process of explaining the procedure, potential risks including rare but fatal complication. Adequate communication is essential to respect patient autonomy and reduce medicolegal problem.

Conclusion: This case highlights the sudden and fatal nature of AFE in previously stable patient. Its unpredictability and high mortality underline the importance of adequate informed consent, clear communication, and proper documentation to address potential medicolegal issues.

Keyword: Amniotic fluid embolism, informed consent

Over-treatment in Terminal Ovarian Cancer Patients with Multiorgan Failure: An Ethical and Clinical Review in ICU Decision-Making

¹L. B. Sihombing, ¹A. Kusumanto, ¹E. Rahmawati

¹Obstetric and Gynecology Department, Faculty of Medicine, Public Health, and Nursing, Gadjah Mada University, Yogyakarta, Indonesia

Correspondence author: Leo Baik Mejini Sihombing

Email: leobaikms@gmail.com

ABSTRACT

Over-treatment in terminal cancer patients represents a significant clinical and ethical challenge, particularly in intensive care settings where aggressive interventions are frequently continued despite limited clinical benefit. This report presents a case of a 35-year-old woman with recurrent progressive ovarian cancer admitted to the surgical intensive care unit with multiorgan failure. The patient was dependent on long-term mechanical ventilation via tracheostomy and complicated by septic shock, infective endocarditis, pulmonary edema, pneumonia, and multiple cerebral infarctions with hemorrhagic transformation, reflecting advanced systemic involvement and poor neurologic prognosis. Laboratory findings revealed metabolic acidosis, hyperlactatemia, hyperkalemia, and oliguria, indicating severe metabolic derangement and organ dysfunction. Despite a very poor performance status and minimal likelihood of recovery, further management including third-line chemotherapy and planned debulking surgery was still considered. This case demonstrates features of medical futility, including physiological, quantitative, and qualitative futility, in which aggressive interventions are unlikely to improve survival or restore meaningful quality of life. Instead, such interventions may prolong suffering, increase the burden of invasive procedures, and delay appropriate end-of-life care, thereby conflicting with the principle of non-maleficence and failing to fulfill beneficence. In addition, disproportionate use of intensive care resources raises concerns regarding justice, while patient autonomy is limited due to surrogate decision-making in the absence of advance directives. The ethical dilemma in this case lies between continuing life-prolonging interventions and prioritizing quality of life, dignity, and proportionality of care. Based on multidisciplinary evaluation and ethical considerations, a transition toward palliative-focused management was identified as the most appropriate approach, emphasizing symptom control, patient comfort, and alignment of treatment with realistic goals of care.

Keywords: Ovarian cancer, medical futility, over-treatment, intensive care unit, bioethics, palliative care

Dilema Wanita dengan Giant Adenomyosis: Otonomi VS Paternalisme

Ni Putu Dea Pawitri Handayani¹, Agung Dewanto^{1,2}, Endah Rahmawati¹, Ardhanu Kusumanto^{1,2}

¹Departemen Obstetri dan Ginekologi, Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan Universitas Gadjah Mada, 55281, Yogyakarta, Indonesia.

²Departemen Obstetri dan Ginekologi, RS Dr. Sardjito, 55281, Yogyakarta, Indonesia.

ABSTRAK

Pendahuluan: Kesehatan reproduksi merupakan hak dasar manusia, namun penerapannya sering menimbulkan ketidakadilan bagi perempuan karena pengaruh sosial. Mencapai kesehatan reproduksi berarti memiliki kesejahteraan fisik, mental, dan sosial utuh. Keputusan pengobatan terkait kesehatan reproduksi melibatkan dilema antara indikasi medis, otonomi pasien dan tekanan sosial.

Metode: Case report, berfokus pada pengambilan keputusan dengan dilema klinis dan psikososial. Ny. YS (43 tahun) dengan adenomyosis dan infertil, mengeluh nyeri haid hebat dan volume darah haid banyak. Suami pasien, panglima tentara, berharap memiliki anak kandung demi kebahagiaannya. Pasien dan suami menolak tindakan operatif dan konservatif. Tenaga kesehatan perlu menyeimbangkan beneficence dan otonomi pasien dalam perspektif medis, hukum, agama, dan sosial.

Hasil dan Diskusi: Manajemen giant adenomyosis: konservatif (NSAID dan hormonal) serta operatif (histerektomi atau adenomyektomi). Meta-analisis menunjukkan pasien adenomyosis meningkatkan risiko abortus hingga 31%. Menunda terapi dapat menurunkan kualitas hidup. Hak kesehatan tercantum dalam UU No. 17 Tahun 2023. Berdasarkan perspektif agama, Kristen, histerektomi diperbolehkan jika uterus tidak dapat mempertahankan hamil aterm. Dalam Islam, histerektomi diperbolehkan jika kondisi darurat. Umat Hindu mengenal prinsip Ahimsa (tanpa kekerasan). Prinsip bioetika perspektif sosial, Autonomy (hak pasien terkait reproduksi), Beneficence (manajemen pasien optimal), Non-Maleficence (mencegah pengambilan keputusan berbahaya), Justice (pasien memahami risiko-manfaat pengobatan). Dalam kasus ini, muncul dilema etik. Autonomy vs Beneficence, pasien tidak menjalani terapi karena tekanan pasangan, namun dokter ingin memberikan pengobatan terbaik tapi rawan melanggar otonomi pasien. Beneficence vs Non-maleficence, tindakan medis tepat bisa saja berdampak secara psikologis jika pasien belum siap. Autonomy vs Non-maleficence, keputusan pasien menyebabkan kualitas hidup terganggu. Professional Integrity vs Autonomy, tantangan dokter menjaga profesionalitas namun tetap menghormati keputusan pasien.

Kesimpulan: Hak kesehatan reproduksi wanita tidak hanya dipengaruhi perspektif agama namun lebih kuat dipengaruhi paternalisme. Disarankan perlu sosialisasi perlindungan hak kesehatan reproduksi wanita menekankan keseimbangan otonomi pasien dan dukungan psikososial.

Kata Kunci: Hak kesehatan reproduksi wanita, paternalisme, adenomyosis, infertil, dilema etik

Dilema Etik Dokter dalam Pengambilan Keputusan Tubektomi pada Perempuan Usia Muda: Laporan Kasus dengan Perspektif Bioetik, Hukum, Sosial Budaya, dan Agama

Bunga Wiharning SP¹, Agung Dewanto², Endah Rahmawati¹, Shinta Prawitasari²

¹Departemen Obstetri dan Ginekologi, Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan
Universitas Gadjah Mada, 55281, Yogyakarta, Indonesia.

²Departemen Obstetri dan Ginekologi, RS Dr. Sardjito, 55281, Yogyakarta, Indonesia.

ABSTRAK

Pendahuluan: Tubektomi pada perempuan usia muda sering menimbulkan dilema etik bagi dokter karena kekhawatiran penyesalan bagi pasien, karena keberhasilan reversi setelah tubektomi terbatas dan berisiko komplikasi. Dilema etik terjadi karena persinggungan antara otonomi pasien tentang hak reproduksi, dan prinsip non maleficence dokter untuk mencegah penyesalan pasien.

Metode: Laporan kasus dari perempuan dengan sosial ekonomi rendah, G4P3A0 hamil 40 minggu, menginginkan tubektomi saat reseksio sesaria di usia 27 tahun. Berdasarkan BKKBN, pasien belum memenuhi syarat tubektomi secara usia, sehingga dokter memutuskan menolak tindakan tubektomi.

Hasil: WHO mengemukakan tubektomi usia muda diperbolehkan berdasarkan otonomi dan informed consent tanpa diskriminasi usia. Beberapa hukum nasional mempertimbangkan paritas, kondisi medis, persetujuan pasangan, dan risiko penyesalan. Perempuan muda atau paritas sedikit dianggap menyimpang ekspektasi sosial dan impulsif. Tubektomi merupakan pilihan pada ekonomi terbatas untuk menjaga kualitas hidup. Mayoritas agama membatasi, Islam dan Hindu memperbolehkan atas indikasi medis, Kristen dan Katolik melarang kecuali efek samping terapeutik, Buddha menekankan niat moral dan tidak merugikan kehidupan. Pengambilan keputusan tubektomi dari **otonomi** pasien kompeten, tanggung jawab dokter menerapkan prinsip **non-maleficence**, mencegah penyesalan. Berdasarkan pendekatan Four Box Method, pertimbangan dilakukan komprehensif tanpa batasan usia atau paritas, berdasarkan bukti klinis dan informed consent adekuat yang menjamin **beneficence** serta **justice** dalam akses pelayanan kesehatan reproduksi.

Kesimpulan: Otonomi pasien menjadi landasan utama pengambilan keputusan medis. Usia muda dan paritas sedikit bukan alasan menolak tubektomi jika pasien kompeten dan mendapatkan informed consent adekuat, dengan pertimbangan agama, sosial budaya dan resiko penyesalan. Penolakan tubektomi berdasarkan conscientious objection doctor dengan merujuk pada tenaga kesehatan lain yang bersedia.

Saran: Dokter menghormati otonomi pasien untuk menghentikan reproduksi atas kesadaran serta informed consent adekuat. Solusi jika terdapat penyesalan pasien berupa reanastomosis tuba dan IVF.

Kata kunci: tubektomi, usia muda, otonomi pasien, conscientious objection doctor

Analisis Faktor Maternal yang dapat Mempengaruhi Kejadian Preeklampsia di Puskesmas Tiga Dolok Kabupaten Simalungun

Audry Evandou Lubis^a, Ronaldo Nicolas Nathaniel Situmorang^b, Helen Debora Br. Napitupulu^b, Irwan Syahputra^b

^aDokter Umum Puskesmas Tiga Dolok

^bMahasiswa Fakultas Kedokteran Universitas Methodist Indonesia

Korespondensi Penulis: Audry Evandou Lubis, Email: evandolubis@gmail.com

HP/WA: 081262651121, Medan, Indonesia

ABSTRAK

Pendahuluan: Preeklampsia adalah salah satu penyebab kematian ibu tertinggi kedua setelah perdarahan. Di seluruh Dunia, Kemenkes mencatat terdapat 10% dari total ibu hamil yang mengalami preeklampsia. Oleh sebab itu tujuan penelitian ini adalah untuk mengetahui pengaruh anemia, primigravida, dan kehamilan remaja terhadap kejadian preeklampsia di Puskesmas Tiga Dolok Kabupaten Simalungun periode Februari 2023 – Februari 2024.

Metode: Penelitian dilakukan di Puskesmas Tiga Dolok, Simalungun. Desain penelitian ini merupakan cross sectional. Sampel dalam penelitian ini berjumlah 79 orang. Teknik pengambilan sampel menggunakan simple random sampling. Instrumen yang dipakai dalam penelitian ini adalah rekam medik. Analisis data menggunakan chi-square.

Hasil: Dari total sampel penelitian sebanyak 79 orang ibu hamil, ditemukan 35 orang ibu mengalami preeklampsia dan 44 orang ibu hamil tidak mengalami preeklampsia. Berdasarkan uji statistik diperoleh p-value = 0,003 pada hubungan anemia dengan kejadian preeklampsia, p-value = 0,006 pada hubungan primigravida dengan kejadian preeklampsia, p-value = <0,001 pada hubungan kehamilan remaja dengan kejadian preeklampsia di Puskesmas Tiga Dolok.

Kesimpulan: Terdapat hubungan yang signifikan antara anemia, primigravida dan kehamilan remaja terhadap kejadian preeklampsia di Puskesmas Tiga Dolok pada Februari 2023 – Februari 2024. Diharapkan kepada ibu hamil dan calon ibu untuk memperhatikan faktor resiko tersebut agar terhindar dari kejadian preeklampsia di kemudian hari.

Kata Kunci: Anemia, Primigravida, Kehamilan Remaja, Preeklampsia

Clinical and Psychosocial Challenges in an Adolescent Pregnancy Complicated by Severe Mitral Regurgitation and Preeclampsia: A Case Report Using the DASS-21

Erma Rachmayanti¹, Vyanda Sri Weningtyas¹, Dini Hidayat¹, Setya Dian Kartika², Gatot Nyarumenteng Adhipurnawan Winaro¹

¹Department of Obstetrics and Gynecology Dr. Hasan Sadikin General Hospital/Padjadjaran University, Bandung, West Java

²Department of Obstetrics and Gynaecology Prof. Dr. Margono Soekarjo General Hospital, Purwokerto, Central Java

ABSTRACT

Background: Adolescent pregnancy remains an important global public-health problem and is associated with increased risks of maternal and neonatal complications, including preeclampsia, preterm birth and low birth weight. Adolescent pregnancy in combination with significant maternal cardiac disease such as severe mitral regurgitation (MR) poses complex multidisciplinary management challenges and is infrequently reported in the literature.

Case presentation: We report the case of a 15-year-old primigravida (G1P0A0) who presented in active labour (second stage) at an estimated 32 weeks' gestation with history of progressive contractions, rupture of membranes and recent diagnosis of pregnancy-associated hypertension. She had been evaluated at a referring hospital where echocardiography documented severe mitral regurgitation with mild pulmonary and tricuspid regurgitation. On arrival she had elevated blood pressure and a systolic murmur; fetal assessment indicated a live female neonate delivered preterm (birth weight 1160 g, Apgar scores 6 and 8 at 1 and 5 minutes). Maternal management included uterotonic infusion (oxytocin), seizure prophylaxis/therapy with magnesium sulfate for severe preeclampsia, antihypertensive therapy and multidisciplinary consultation with cardiology and neonatology. The mother and neonate were stabilized and transferred for continued care and monitoring.

Conclusion: This case underscores the intertwined clinical and psychosocial challenges of adolescent pregnancy complicated by severe cardiac disease and preeclampsia. Early identification, hemodynamic optimization, and multidisciplinary collaboration are crucial to optimize maternal and neonatal outcomes. The case also highlights the importance of strengthening preventive reproductive health education, early antenatal cardiac screening, and psychosocial support for adolescents in low-resource settings.

Keywords: Adolescent pregnancy; Mitral regurgitation; Multidisciplinary management; Preeclampsia; Preterm delivery; Psychosocial factors.

Extrauterine IUD Translocation to the Rectosigmoid Colon with Complication Abscess Formation

Muhammad Aris Indrawan¹, Sutrisno²

¹Faculty of Medicine, Brawijaya University

²Department of Obstetrics-Gynecology, Saiful Anwar Hospital

ABSTRACT

Introduction: Intrauterine devices (IUDs) are widely used reversible contraceptive methods with high effectiveness and safety. However, rare complications such as uterine perforation and extrauterine migration may occur, potentially involving adjacent organs, including the gastrointestinal tract.

Case: A 29-year-old woman presented with chronic left lower abdominal pain. Initial ultrasonography failed to identify the IUD location. Further evaluation revealed an extrauterine IUD that had migrated to the rectosigmoid region. No significant comorbidities or specific gastrointestinal or urinary symptoms were reported.

Intervention: The patient underwent elective laparoscopic removal of the IUD combined with diagnostic colonoscopy. Intraoperative findings demonstrated migration to the rectosigmoid colon with localized abscess formation. The device was successfully removed without intraoperative complications.

Outcome: Postoperative recovery was uneventful with resolution of symptoms.

Conclusion: This case is a rare but serious complication that may involve adjacent organs and nonspecific symptoms. Imaging is crucial for diagnosis and minimally invasive surgery is effective for management. Early detection and regular follow-up are important to prevent morbidity.

Keywords: Intrauterine Device, IUD Translocation, Uterine Perforation, Rectosigmoid abscess

Dilema Etik Pengelolaan Abandoned Embryo pada Program IVF

Diah Kuntari, M. Nailul Fahmi, Endah Rahmawati
Departemen Obstetri dan Ginekologi, Fakultas Kedokteran, Kesehatan Masyarakat, dan
Keperawatan (FKKMK), Universitas Gadjah Mada, Yogyakarta, Indonesia

ABSTRAK

Latar belakang: Keberhasilan fertilisasi in vitro (IVF) meningkatkan jumlah embrio cadangan yang tidak digunakan, sehingga memunculkan fenomena abandoned embryo. Kondisi ini menimbulkan dilema etik terkait penentuan nasib embrio selanjutnya.

Tujuan: Studi ini bertujuan untuk mengkaji dilema etik dalam pengelolaan abandoned embryo dengan pendekatan bioetik komprehensif.

Metode: Kajian literatur dengan pendekatan bioetik menggunakan Four Box Method (indikasi medis, preferensi pasien, kualitas hidup, dan konteks sosial). Analisis dilakukan terhadap regulasi di Indonesia serta dibandingkan dengan regulasi internasional.

Hasil: Terdapat beberapa isu utama, yaitu perdebatan mengenai status moral embrio, konflik hak reproduksi antar pasangan terutama pada kasus perceraian, keterbatasan informed consent, serta beban psikososial. Dari sisi tenaga kesehatan, terdapat dilema antara kewajiban profesional dan conscientious objection. Regulasi di Indonesia telah mengatur persetujuan tertulis dalam pengelolaan embrio, namun belum secara spesifik mengatur tata cara pengelolaan abandoned embryo. Secara global, terdapat variasi kebijakan terkait durasi penyimpanan, pemusnahan, dan donasi embrio. Perspektif sosial, budaya, dan agama juga berperan dalam pengambilan keputusan.

Kesimpulan: Pengelolaan abandoned embryo merupakan isu multidimensional yang membutuhkan pendekatan komprehensif. Diperlukan penguatan regulasi, optimalisasi informed consent pra-IVF, konseling psikososial, serta mekanisme mediasi etik. Pelibatan tokoh agama dan pemangku kebijakan penting untuk memastikan kebijakan yang selaras dengan nilai budaya dan agama di Indonesia. Hal ini untuk menjamin keseimbangan antara otonomi pasien dan tanggung jawab profesional.

Kata kunci: abandoned embryo, IVF, bioetik, informed consent, regulasi kesehatan

Postpartum Fecal Incontinence in an Adolescent due to Obstetric Anal Sphincter Injury: Challenges of Early Detection in Primary Care

Putri Ayu Kartikasari¹, Faiq Ilham Maulana²

¹Ngunut Primary Health Center, Tulungagung, Jawa Timur

²Faculty of Medicine, Universitas Diponegoro, Semarang, Jawa Tengah

ABSTRACT

Background: Postpartum fecal incontinence (FI) is a serious complication most commonly caused by obstetric anal sphincter injury (OASI). Up to 50% of cases remain unrecognized during the acute phase, particularly in primary care settings. This issue is even more critical in adolescents, who have greater biological and psychosocial vulnerability, yet remain underreported in the literature.

Case: A 15 year old primiparous female presented with fecal and flatal incontinence two months after term vaginal delivery complicated by an undocumented perineal tear. Examination revealed decreased anal sphincter tone and weak voluntary contraction without rectovaginal fistula. A clinical diagnosis of fecal incontinence secondary to suspected third degree OASI was made. The patient received conservative management and was referred for further evaluation.

Discussion: This case highlights the potential under recognition of anal sphincter injury in adolescents, reflecting limitations in early detection within primary care settings. Compared with recommendations from RCOG, ACOG, and IUGA, notable gaps were identified, including undocumented perineal tear grading and lack of structured postpartum follow-up. These deficiencies likely contributed to delayed identification of OASI until symptoms became clinically significant. In adolescents, the impact of fecal incontinence extends beyond physical symptoms, substantially affecting quality of life and psychosocial well-being.

Conclusion: Postpartum fecal incontinence should be regarded as a red flag for possible anal sphincter injury until proven otherwise. Early detection based on simple clinical evaluation in primary care is essential to prevent delayed diagnosis and long-term morbidity, particularly in adolescent populations.

Keywords: Fecal incontinence, obstetric anal sphincter injury (OASI), postpartum, adolescent, primary care.

From Suspected Cesarean Scar Pregnancy to Placenta Accreta Spectrum: The Role of Referral Systems and Continuity of Care in High-Risk Pregnancy

Vicky Ilda Viantini¹, Ai Suratman², Irwan Taufiqur Rachman³, Shofwal Widad⁴

¹Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

²Department of Obstetrics and Gynecology, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada – KRT Setjonegoro Regional General Hospital, Wonosobo, Indonesia

³Department of Obstetrics and Gynecology, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada – Dr. Sardjito Hospital, Yogyakarta, Indonesia

⁴Department of Obstetrics and Gynecology, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada – Dr. Sardjito Hospital, Yogyakarta, Indonesia

Correspondence: vviantini@gmail.com

ABSTRACT

Background: Placenta accreta spectrum (PAS) is a major cause of life-threatening obstetric hemorrhage due to abnormal trophoblastic invasion into the myometrium. Early suspicion of abnormal implantation, such as cesarean scar pregnancy (CSP), is critical in determining clinical management. This case highlights the importance of referral systems, continuity of care, and the impact of increasing cesarean section rates on long-term obstetric complications.

Case: A 34-year-old woman, G4P2A1 at 29 weeks and 3 days of gestation, with a history of two cesarean sections and one curettage, was initially suspected to have CSP at a secondary healthcare facility and referred to a tertiary center. The pregnancy was continued with structured antenatal care. During follow-up, the patient experienced recurrent antepartum hemorrhage requiring hospitalization. Ultrasonography revealed total placenta previa with features suggestive of PAS, including intraplacental lacunae, bridging vessels, and myometrial thinning, with a Placenta Accreta Index (PAI) score of 8.5 indicating a high risk of invasion. Delivery was planned at 37 weeks. However, the patient developed massive hemorrhage of approximately 1600 mL, requiring cesarean hysterectomy.

Discussion: This case demonstrates progression from CSP to PAS as a consequence of prior cesarean sections, reflecting overmedicalization in obstetric practice. Despite multidisciplinary planning, massive hemorrhage may still occur. However, effective referral systems, continuity of care, and adequate facility readiness, including blood transfusion, are crucial in ensuring maternal survival. The case also highlights the financial burden of complex obstetric care, emphasizing that prevention through strict indications for primary cesarean section is more effective.

Conclusion: Early detection, effective referral systems, and comprehensive delivery planning are essential in managing PAS. Controlling cesarean section rates is key to reducing future obstetric complications.

Keywords: placenta accreta spectrum, cesarean scar pregnancy, referral system, continuity of care, high-risk pregnancy

Placental Abruption with IUFD: When Delayed Care Turns Fatal—A Clinical and Social Perspective

Ahmad Fauzi Noviantara^{*1}, Hadikagusti Adora², Mutiara Islam²

¹Obstetric and Gynecology Specialist Education Program, Faculty of Medicine Andalas University, Padang, West Sumatra, Indonesia.

²Prof H. Muhammad Yamin General Hospital, Pariaman, West Sumatra, Indonesia.

ABSTRACT

Introduction: Placental abruption is a life-threatening obstetric emergency associated with significant maternal and perinatal morbidity and mortality. Despite advances in obstetric care, preventable delays in recognizing danger signs and accessing healthcare services remain a major contributor to adverse outcomes, particularly in low-resource settings. The “three delays model” highlights how delays in decision-making and access to care significantly increase the risk of fetal death.

Case: A 28-year-old woman, G3P2A0L1, 31-32 weeks of pregnancy, presented with severe abdominal pain and vaginal bleeding after a prolonged delay in seeking care. On admission, she was hypertensive (189/103 mmHg) with a tense, tender uterus. Ultrasonography revealed a retroplacental hematoma with absent fetal cardiac activity, confirming IUFD. Laboratory findings showed anemia (Hemoglobin 8.6 g/dL), normal platelet count (161,000/ μ L), and elevated D-dimer (4.56 μ g/mL), suggesting ongoing coagulopathy. Emergency cesarean section was performed. Intraoperatively, a Couvelaire uterus involving >50% of the uterine surface with uterine atony was identified, requiring B-Lynch compression sutures. The fetus was delivered stillborn. The mother recovered with supportive management.

Discussion: This case underscores how delays in decision-making and access to care (type I and II delays) can transform a potentially manageable condition into a fatal fetal outcome. Sociocultural barriers, including low maternal awareness and limited socioeconomic resources, play a critical role in delayed presentation.

Conclusion: Delayed management of placental abruption can rapidly lead to catastrophic fetal outcomes. Strengthening maternal education, early risk recognition, and timely referral systems are essential to reduce preventable perinatal mortality.

Keywords: placental abruption, IUFD, delayed care, maternal awareness, socioeconomic barriers

Hydatidiform Mole in an Adolescent: A Sentinel Event of Delayed Care and Reproductive Health Inequity

Rony Sibuea¹, Rudi Priyo Utomo²

Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Brawijaya, Indonesia

ABSTRACT

Background: Adolescent pregnancy represents a major reproductive health challenge with both biological and social implications. In Indonesia, approximately 1 in 9 women marry before the age of 18, increasing the risk of pregnancy-related complications, including hydatidiform mole, which is often underrecognized in this population.

Case: A 16-year-old unmarried female presented with persistent nausea, vaginal bleeding, and palpitations. Evaluation revealed hydatidiform mole with markedly elevated β -hCG, complicated by secondary hyperthyroidism, anemia, and undernutrition. Delayed referral due to limited healthcare resources led to clinical deterioration and progression to impending thyroid storm

Discussion: This case highlights the critical role of social determinants of health in disease progression. Low reproductive health literacy, limited access to antenatal services, and dependency in healthcare decision-making contributed to delayed care-seeking. Social stigma surrounding adolescent and out-of-wedlock pregnancy further hindered timely access to care. At the system level, inadequate primary healthcare capacity and suboptimal referral pathways exacerbated delays in receiving definitive treatment. These findings align with the three delays model, increasing the risk of severe complications. Beyond clinical outcomes, the patient also faces psychosocial burdens, including stigma, educational disruption, and long-term reproductive health risks. Challenges in post-evacuation follow-up further complicate management.

Conclusion: Hydatidiform mole in adolescence reflects systemic gaps in reproductive health services. Comprehensive obstetric social approaches are essential to reduce morbidity and improve outcomes.

Keywords: hydatidiform mole, adolescence, obstetric social, delay in care, social determinants of health

**Impact of Community-Based Premarital Education on Reproductive Health Knowledge:
Implications for Marital Readiness and the Role of Sex and Nutritional Status among Young Adults**

Fitriana Aulia Sabila Eka Putri^{1*}, Dimas Allaam Baraa Perdana¹, Regina Mei Lala¹, Shafira Khalisa Hanun¹

¹Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Daerah Istimewa Yogyakarta, Indonesia.

Email: fitriana.a@mail.ugm.ac.id.

ABSTRACT

Background: Early marriage remains a major public health issue in Indonesia, increasing the risks of divorce, poor reproductive outcomes, and maternal–neonatal complications. Limited knowledge of reproductive health, marital readiness, and nutrition among young people exacerbates these risks. Premarital education, within a social obstetrics and gynecology framework, may improve preparedness and support long-term reductions in maternal and infant mortality. This study evaluated the effectiveness of a community-based premarital education program and identified factors associated with knowledge improvement.

Methods: A one-group pre–post interventional study was conducted among 27 unmarried adolescents and young adults from community youth organizations in Wukirsari Village, Yogyakarta. Participants were recruited using convenience sampling. The intervention covered premarital guidance and agreements, anemia prevention, reproductive health, and psychological readiness, delivered through interactive lectures and discussions. Knowledge was assessed using pretest and posttest questionnaires. Data were analyzed using paired t-test, independent t-test, pearson and spearman correlation, and multiple linear regression.

Results and Discussion: Knowledge scores improved significantly after the intervention (mean difference = 21.85 ± 17.77 ; $p < 0.001$; Cohen's $d = 1.23$). Baseline knowledge did not differ by sex ($p = 0.201$), but posttest scores and improvement differed significantly ($p < 0.05$; $d = 0.94$). Body mass index (BMI) was positively associated with knowledge improvement ($p < 0.05$). Regression analysis identified sex ($\beta = 0.529$, $p = 0.049$) and BMI ($\beta = 0.475$, $p = 0.008$) as significant predictors, explaining 41.1% of the variance. These findings suggest that individual characteristics influence the effectiveness of educational interventions.

Conclusion: Community-based premarital education effectively improves reproductive health knowledge among young adults. Sex and nutritional status influence learning outcomes. Strengthening such programs may enhance reproductive health services and reduce maternal and infant health risks in Indonesia.

Keywords: premarital education, reproductive health, social obstetrics, maternal health, Indonesia

Mempertahankan Kehamilan pada Ibu dengan Mati Batang Otak: Dilema antara Mengakhiri Penderitaan Ibu VS Memberi Harapan Hidup pada Janin

Andre Agastia H¹, Agung Dewanto², Ardhanu Kusumanto³

¹ Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan, Universitas Gadjah Mada, Yogyakarta, Indonesia

^{2,3} Departemen Obstetri dan Ginekologi, Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan, Universitas Gadjah Mada – Rumah Sakit Dr. Sardjito, Yogyakarta, Indonesia

Korespondensi: andrehutasoit1011@gmail.com/081361015000

ABSTRAK

Latar Belakang: Kemajuan teknologi memungkinkan dilakukannya upaya mempertahankan kehamilan hingga janin mencapai usia viabilitas pada ibu dengan kondisi mati batang otak. Namun, keadaan ini menimbulkan dilema etik antara mengakhiri penderitaan ibu dan upaya memberi harapan hidup janin. Oleh karena itu, pengambilan keputusan klinis harus mempertimbangkan berbagai aspek, termasuk medis, etik, hukum, agama, sosial, dan ekonomi.

Kasus: Kasus seorang perempuan, berusia 25 tahun, gravida 1 para 0 abortus 0, usia kehamilan 29 minggu 6 hari, dirujuk dengan penurunan kesadaran sejak empat jam sebelum masuk rumah sakit. Pasien memiliki riwayat kecelakaan lalu lintas saat mengendarai sepeda motor. Pasien kemudian didiagnosis dengan Brainstem Contusion, Traumatic Acute Subdural Hemorrhage of Right Temporo-Parietal Dextra, Cerebral Edema, Hematoma Extra-cranial Parietal Sinistra, G1POA0 hamil 29 minggu 6 hari. Pasien belum dapat ditegakkan apakah sudah mengalami mati batang otak atau belum. Kemudian dilakukan diskusi dan kolaborasi antar divisi ilmu dan edukasi kepada keluarga pasien. Pasien akhirnya diputuskan dilakukan terminasi kehamilan secara perabdominal. Pasien selanjutnya dirawat di ruang intensif, namun meninggal pada hari ke empat, sedangkan bayi meninggal pada hari ke enam perawatan.

Pembahasan: Dari perspektif medis, keberhasilan mempertahankan kehamilan hingga janin mencapai viabilitas dipengaruhi banyak faktor seperti stabilitas kondisi ibu, usia kehamilan, lama perawatan, fasilitas kesehatan dan sebagainya. Namun dari sudut pandang etik, agama, sosial budaya dan ekonomi, sebagian memandang hal ini sebagai bentuk kekerasan terhadap tubuh ibu dan merupakan tindakan yang sia-sia. Keterbatasan regulasi rumah sakit yang spesifik juga menjadi tantangan dalam pengambilan keputusan klinis.

Kesimpulan: Penegakan diagnosis mati batang otak secara akurat merupakan langkah penting sebelum menentukan tata laksana. Tenaga medis dan Komite Etik rumah sakit berperan dalam memberikan informasi yang komprehensif, sedangkan keputusan akhir berada pada pasien melalui advanced directive atau pada keluarga sebagai pengambil keputusan.

Kata Kunci: Mati batang otak, mempertahankan kehamilan

Determinan Sosial dalam Upaya Terminasi Kehamilan Tidak Aman pada Kehamilan Tidak Diinginkan: Serial Kasus dengan Luaran Maternal, Fetal, serta Psikososial

Enlisman Dohare¹, R. Detty Siti Nurdiati Z², Irwan Taufiqur Rachman³

¹Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan, Universitas Gadjah Mada, Yogyakarta, Indonesia

²Departemen Obstetri dan Ginekologi, Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan, Universitas Gadjah Mada – Rumah Sakit Dr. Sardjito, Yogyakarta, Indonesia
Korespondensi: enlismandohare@gmail.com

ABSTRAK

Latar Belakang: Kehamilan tidak diinginkan (KTD) merupakan salah satu determinan utama praktik terminasi kehamilan tidak aman yang berkontribusi terhadap peningkatan angka kematian ibu (AKI) dan angka kematian neonatal (AKN), terutama di negara berkembang. Faktor sosial seperti stigma, keterbatasan akses kontrasepsi, rendahnya pemanfaatan antenatal care (ANC), serta gangguan psikososial mempengaruhi pengambilan keputusan reproduksi. Three delays model menjelaskan keterlambatan dalam pengambilan keputusan, akses ke fasilitas kesehatan, dan penanganan yang berdampak pada luaran klinis.

Kasus: Dilaporkan dua kasus perempuan dengan riwayat penggunaan misoprostol mandiri. Kasus pertama, perempuan 29 tahun G3P1A1 usia kehamilan 32 minggu, datang dengan demam, penurunan gerak janin, fetal takikardi, serta komplikasi berupa infeksi, hiponatremia, dan intrauterine growth restriction (IUGR). Pasien tidak melakukan ANC dan memiliki riwayat kehamilan tidak diinginkan serta gangguan psikologis (EPDS 22). Kasus kedua, perempuan 33 tahun G5P2A2 usia kehamilan 7 minggu, mengalami abortus imminens setelah penggunaan misoprostol dosis rendah secara mandiri akibat kebutuhan kontrasepsi yang tidak terpenuhi, dengan kondisi janin masih viabel.

Pembahasan: Kedua kasus menunjukkan bahwa determinan sosial seperti kehamilan di luar nikah, unmet need kontrasepsi, serta keterbatasan akses layanan berperan besar dalam terjadinya abortus tidak aman pada KTD. Kasus pertama mengalami ketiga komponen three delays yang berujung pada komplikasi berat, sedangkan kasus kedua hanya mengalami keterlambatan pada tahap awal sehingga luaran lebih baik. Literatur menunjukkan bahwa penggunaan misoprostol tanpa supervisi meningkatkan risiko komplikasi, terutama pada usia kehamilan lanjut.

Kesimpulan: Determinasi sosial dan three delays berkontribusi signifikan terhadap luaran maternal dan fetal pada kasus abortus tidak aman pada KTD. Pendekatan terintegrasi berbasis obstetri sosial, edukasi reproduksi, serta penguatan layanan primer diperlukan untuk menurunkan AKI dan AKN.

Kata kunci: kehamilan tidak diinginkan, abortus tidak aman, determinan sosial, three delays, luaran maternal

Assessing Readiness and Training Needs for Interprofessional Collaborative Care of Adolescent Pregnancies in Primary Care: A Mixed-Methods Study

Dyana Safitri Velies^{1,2}, Dwiana Ocviyanti³, Susan M Sawyer^{4,5,6}

¹Doctoral Program in Medical Sciences, Faculty of Medicine Universitas Indonesia/Cipto Mangunkusumo Hospital, Jakarta, Indonesia

²Department of Obstetrics and Gynecology, Faculty of Medicine Universitas Pelita Harapan

³Department of Obstetrics and Gynecology, Faculty of Medicine Universitas Indonesia/Cipto Mangunkusumo Hospital, Jakarta, Indonesia.

⁴Department of Paediatrics, Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne, Parkville, Victoria, Australia

⁵Murdoch Children's Research Institute, Parkville, Victoria, Australia

⁶Centre for Adolescent Health, Royal Children's Hospital, Parkville, Victoria, Australia

ABSTRACT

Background: Adolescent pregnancy presents complex clinical and psychosocial risks affecting the adolescent mother, her child, and the wider family, requiring tailored antenatal care (ANC). Puskesmas (primary healthcare centres) play a strategic role in Indonesia by integrating multidisciplinary providers to deliver continuous, family-centered care from pregnancy through the postpartum period that support the well-being of pregnant adolescents. However, the absence of standardized operating procedures (SOPs) and structured training modules for healthcare professionals around adolescent pregnancy remains a critical gap. This study aims to assess healthcare providers' readiness and identify competency gaps to inform the development of training modules to promote the collaborative management of adolescent pregnancy in Puskesmas.

Methods: A mixed-methods study was conducted in five Puskesmas in Tangerang Regency. Quantitative data were collected from 22 healthcare providers using the Indonesian version of the Collaboration Practice Assessment Tool (CPAT). Qualitative data were obtained through focus group discussions with 24 healthcare providers that were analyzed using NVivo 15.

Results: Most respondents were female (81.82%) and midwives (59.09%), with 40.91% having over 10 years of experience. The majority had prior interprofessional collaboration experience, primarily as team members. Quantitative findings showed high scores in role distribution and coordination (61.23 ± 5.14) and relationships among team members (41.23 ± 3.73), indicating strong foundational collaborative competencies. The lowest scores were for decision-making and conflict management (4.27 ± 2.05), suggesting critical competency gaps. Qualitative findings highlighted established collaborative workflows and community outreach systems functioned as facilitators, while barriers included limited human resources, high workload, and variable teamwork capacity.

Conclusion: Healthcare providers demonstrated foundational readiness for interprofessional collaboration, although key competency gaps and systemic constraints will constrain optimal implementation. Training modules should prioritize leadership development, shared decision-making, conflict management skills, and structured collaborative practices, alongside the development of adolescent-specific SOPs to strengthen primary care services for pregnant adolescents.

Keywords: Adolescent Pregnancy, Collaborative Care, Primary Care, Healthcare Provider Readiness, Mixed-Methods.

Gaps in Postnatal Care: Severe AKI and SIRS from Missed Postpartum Urinary Retention and Preeclampsia – A Case Report

Claire Emmanuela Selamat¹, Jimmy Octavianus Setiawan¹, Nadya Faiza Khairunnisa¹, Sarrah Ayuandari², Laili Chilmawati³

¹Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada

²Division of Fertility and Reproductive Endocrinology, Department of Obstetrics and Gynecology, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada

³Department of Obstetrics and Gynecology, Sleman District General Hospital

ABSTRACT

Background: Despite declining maternal mortality from obstetric hemorrhage in Indonesia, deaths related to hypertensive disorders and infections remain substantial and are increasingly shaped by gaps in postnatal care systems. Covert postpartum urinary retention (PUR) and delayed postpartum preeclampsia are frequently underrecognized, particularly in settings with limited postpartum surveillance, fragmented care pathways, and low provider and patient awareness. This case highlights how clinical oversight intersects with systemic and behavioral barriers, contributing to preventable severe maternal morbidity.

Case Presentation: A 27-year-old woman, P1A0, presented at nine days postpartum with progressive bilateral leg edema, abdominal distention, right flank pain, and minimal urine output for seven days. She had previously sought care on postpartum day four but was discharged without further evaluation, reflecting a missed opportunity for early detection. On admission, her blood pressure was 159/92 mmHg. Catheterization revealed 5,000 mL of retained urine. Urinalysis showed hematuria, proteinuria, and marked leukocyturia, consistent with pyelonephritis. Laboratory findings confirmed Stage 3 Acute Kidney Injury (creatinine 4.2 mg/dL), systemic inflammatory response syndrome, and electrolyte imbalances. The patient was managed with bladder decompression, intravenous antibiotics, and supportive therapy, resulting in clinical recovery.

Discussion: This case demonstrates the interaction between covert PUR and delayed preeclampsia as overlapping yet frequently overlooked postpartum conditions. Beyond pathophysiology, it reflects a critical failure in the continuum of postnatal care. The absence of structured postpartum follow-up, inadequate symptom recognition, and premature reassurance at first contact illustrate a “third delay” (delay in receiving appropriate care), compounded by elements of the first and second delays, including limited awareness and delayed re-presentation. From a social obstetrics perspective, this case underscores that postpartum morbidity is not solely biological but also embedded in health system gaps, provider vigilance, and patient health literacy.

Conclusion: Preventing severe but reversible postpartum complications requires strengthening postnatal care beyond facility-based delivery. Standardized protocols should mandate routine blood pressure monitoring and structured voiding assessment up to 42 days postpartum. Equally important are system-level strategies, including improving provider awareness, enhancing patient education on danger signs, and integrating postpartum risk identifiers within national health systems to support early triage. Addressing these social and systemic determinants is essential to reduce preventable maternal morbidity in resource-constrained settings.

Keywords: postpartum urinary retention; postpartum preeclampsia; acute kidney injury; SIRS; postnatal care; maternal health systems

Adolescent Pregnancy and Adverse Maternal-Neonatal Outcomes: Evidence from a Systematic Review and Meta-analysis

Michelle Anabel¹, Ekarini Aryasatiani²

¹Medical Doctor, Faculty of Medicine, Universitas Brawijaya, East Java, Indonesia

²Department of Obstetric and Gynaecology, Tarakan Regional General Hospital, Jakarta, Indonesia

ABSTRACT

Introduction: Adolescent pregnancy causes global concern due to its impact on disability adjusted life years (DALYs) and morbidity among adolescent girls. Theoretically, a girl's womb is physiologically unready for pregnancy, leading to more complications than in age 20–35. However, recent reports are inconsistent. Here, we aim to assess whether adolescent pregnancy increases maternal and neonatal complications.

Method: Systematic search is conducted according to PRISMA protocol, with inclusion criteria of case-control studies of adolescent pregnancy. We exclude adolescent with previous comorbidities. Meta analysis was conducted with RevMan ver 5.4. For poor maternal outcome, we assess preeclampsia accident, caesarean delivery, and IUGR. Neonatal outcome is assessed from birth weight, premature incident, and APGAR.

Result: Five primary studies are included. For the maternal outcome, only IUGR found significant with higher incidence in adolescent group with OR 1.85, 95% CI 1.22–2.80; $p=0.004$; I2 0% while preeclampsia, cesarean delivery, are insignificant. For neonatal outcome, we found that neonates of the adolescent group have lower birth weight compared to adult group (MD 1.85, CI 95% 1.22–2.80; $p=0.004$; I2 0%) and more likely to have lower APGAR than adult group with OR 1.4, 95% CI 1.23–1.60; $p<0.000001$. Premature incidences are higher in adults OR 0.45, CI 95% 0.42–0.48; $p<0.00001$; I2 99%. Neonatal health are more affected from adolescent pregnancy, related to immature uterus and progesterone resistance. IUGR and lower birth weight are also more likely due to foetal sensitivity to nutrients. Good prenatal service and fewer comorbidities are expected to reduce maternal complications in adult group.

Conclusion: In antenatal and perinatal, adolescent pregnancy is more disadvantageous for neonates. This systematic review doesn't evaluate psychological factors. This review does not erase the fact that teenage pregnancy can cause health problems for mothers. Good prenatal care can reduce problems.

Keywords: Teenage, maternal, neonatal, adolescent

Delayed Diagnosis of Imperforate Hymen in an Adolescent: Missed Clinical Cues and Sociocultural Barriers to Genital Examination: A Case Report

Nadya Faiza Khairunnisa¹, Jimmy Octavianus Setiawan¹, Claire Emmanuela Selamat¹, Sarrah Ayuandari², Agus Wahyu Widayat³

¹Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada

²Division of Fertility and Reproductive Endocrinology, Department of Obstetrics and Gynecology, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada

³Department of Obstetrics and Gynecology, Sleman District General Hospital

ABSTRACT

Background: Imperforate hymen, a congenital obstructive anomaly of the female reproductive tract affecting approximately 1 in 1,000 females, is readily diagnosable through routine external genital examination. It frequently goes undetected until puberty, when retained menstrual blood produces hematocolpos or hematometra. In Indonesia, sociocultural norms surrounding modesty render adolescent genital examination a sensitive and frequently omitted procedure, even in clinical settings. This inhibition, compounded by poor protocol adherence, creates a systemic vulnerability that disproportionately harms young patients.

Case Presentation: A 13-year-old girl presented with a two-month history of severe cyclical lower abdominal pain (VAS 8/10), primary amenorrhea, constipation, and a bulging introital mass. Evaluated twice at two separate facilities, she received diagnoses of low back pain and dyspepsia, with no genital examination performed despite mandatory pediatric protocols. The correct diagnosis was ultimately prompted not by a clinician, but by the patient's mother, who independently identified the bulging vaginal introital mass at home. Ultrasonography confirmed hematocolpos and hematometra. School absenteeism and persistent undertreated pain significantly impaired her daily functioning. She underwent X-shaped hymenectomy with approximately 1,000 mL of dark blood evacuated intraoperatively; discharged one day post-procedure, one-week follow-up confirmed full restoration of daily functioning.

Discussion: This case illustrates a preventable diagnostic delay driven by incomplete examination and diagnostic anchoring. Beyond acute suffering, prolonged obstruction risks retrograde menstrual flow, increasing the likelihood of endometriosis and long-term fertility impairment — consequences avoidable with timely recognition. Sociocultural reluctance to examine adolescent genitalia likely compounded the failure, underscoring the need for culturally sensitive communication to facilitate clinical trust. Reinforcing protocols through clinician training, alongside community education on pubertal milestones, is essential to reduce stigma and close this diagnostic gap.

Conclusion: Imperforate hymen is diagnosable and curable yet remains vulnerable to delay when examination is omitted. Preventing avoidable morbidity demands strict protocol adherence and culturally competent clinical practice, ensuring essential assessments are never bypassed due to sociocultural discomfort. Early recognition is paramount in preserving adolescent reproductive health.

Keywords: imperforate hymen; delayed diagnosis; sociocultural barriers; adolescent gynecology; primary amenorrhea

Diagnostic Challenges of HbE/ β -Thalassemia in a Multigravida with Refractory Anaemia and History of Repeated Transfusions: A Case Report

Nur Arifah Ardiyanti, Christian Todo, Syauqi Kashira
Dr. M. Ashari Pemasang Hospital

ABSTRACT

Background: Anaemia in pregnancy is frequently attributed solely to iron deficiency, with hemoglobinopathies often overlooked as an underlying cause. Delayed recognition may result in severe maternal-foetal complications. This case highlights the clinical consequences of deferred hemoglobinopathy screening in a transfusion-dependent multigravida.

Case Report: A 36-year-old woman, G3P2A0, presented with severe refractory anaemia (Hb 5.2–6.0 g/dL). Her obstetric history revealed a pattern of major complications: G1 (2014) was complicated by eclampsia and postpartum haemorrhage requiring ICU admission, while G2 (2018) resulted in intrauterine foetal death (IUFD) at 34 weeks. During G3, she received 20 units of packed red cells (PRC) across five transfusion episodes without achieving stable Hb improvement. Laboratory evaluation at 37 weeks confirmed compound heterozygous HbE/ β -thalassemia on haemoglobin electrophoresis: HbA 57.4%, HbE 33.3%, HbA₂ 4.7%, HbF 4.6%. Due to repeated transfusions without chelation therapy, the patient developed massive iron overload with serum ferritin of 2,373 ng/mL.

Discussion: Delayed diagnosis resulted in ferritin accumulation exceeding 2,000 ng/mL, substantially increasing the risk of organ dysfunction and long-term sequelae. Prior IUFD and eclampsia were likely exacerbated by unrecognised chronic haemolytic anaemia. Multidisciplinary management was essential yet suboptimal, constrained by limited diagnostic resources in a regional healthcare facilities.

Conclusion: This case underscores the importance of haemoglobin electrophoresis in pregnant women with refractory anaemia, particularly in hemoglobinopathy-endemic regions. Early diagnosis is critical to prevent excessive post-transfusion iron accumulation and to optimise management, thereby breaking the cycle of adverse obstetric outcomes.

Keywords: Thalassemia, refractory anaemia, repeated transfusions.

Luaran Ibu dan Perinatal pada Rujukan Maternal Hipertensi dalam Kehamilan di Rsud Dr. Doris Sylvanus Palangka Raya Kalimantan Tengah Tahun 2024-2025

Kezia Marcella Putri, Putu Aditya Adi Purbawa, Miranda Gratia Parhusip
RSUD dr. Doris Sylvanus Palangka Raya

ABSTRAK

Latar Belakang: Upaya peningkatan status Kesehatan ibu merupakan salah satu program prioritas. Hal ini dikarenakan, masalah Kesehatan ibu masih menjadi salah satu permasalahan utama di bidang Kesehatan. Angka kematian ibu (AKI) di Indonesia tertinggi ketiga di Asia Tenggara. Target penurunan AKI 77 per 100.000 kelahiran hidup, untuk mengejar target SDG's yaitu < 70 per 100.000 kelahiran hidup tahun 2030.

Metode: Penelitian ini merupakan retrospektif deskriptif untuk mengetahui luaran ibu dan perinatal pada rujukan maternal dengan menggunakan total sampling. Dilakukan telaah menggunakan buku register rujukan, rekam medis elektronik dari Januari 2024-Desember 2025 di IGD RSUD dr. Doris Sylvanus.

Hasil Diskusi: Terdapat total 420 rujukan maternal, dengan hipertensi dalam kehamilan sebagai kasus tertinggi sebanyak 85 kasus. Luaran ibu yang terjadi adalah eklamsia sebanyak 9 orang, sindrom HELLP 4 orang, sepsis 2 orang dan meninggal 1 orang. Komplikasi perinatal yang terjadi adalah meninggal sebanyak 12 bayi, asfiksia 23 kasus, BBLR 26 kasus, prematur 19 kasus, dan infeksi 29 kasus. Pelayanan antenatal perlu dilakukan secara komprehensif dan terpadu. Penguatan dan penyegaran terkait sistem rujukan terencana (termasuk pencatatan saat Antenatal Care) perlu dilakukan, untuk menguatkan rujukan maternal, serta mengurangi angka kematian ibu dan bayi secara langsung maupun tidak langsung.

Kesimpulan: Terdapat 85 kasus hipertensi dalam kehamilan yang di rujuk. Dengan luaran ibu meninggal sebanyak 1 orang, eklamsia sebanyak 9 orang. Serta luaran perinatal terdapat 12 bayi meninggal, asfiksia 23 kasus, BBLR 26 kasus, prematur 19 kasus, dan infeksi 29 kasus. Oleh sebab itu perlu dilakukan penguatan sistem rujukan terencana, untuk mengurangi angka kematian ibu dan bayi di Provinsi Kalimantan Tengah.

Kata Kunci: hipertensi dalam kehamilan, rujukan terencana, ANC

A Case Report of HPV Infection in a Low-Risk, Multiparous Women in Camouflage with IUD Insertion

^{1,2} Hanako Laros Ratuwangi and ^{2,3} Gumilang Wiranegara

¹ Batam University

² Badan Pengusahaan Hospital

³ Obstetric and Gynecology Department at Badan Pengusahaan hospital

Co Author: Hanako Laros Ratuwangi, Ratuwangi92@gmail.com

ABSTRACT

Background: In the socio-obstetric landscape, multiparous women with stable marital status and routine screening histories are often perceived as "low-risk" for aggressive Human Papillomavirus (HPV) infections. However, the intersection of postpartum contraceptive care and professional life can create a "diagnostic blind spot" where early neoplastic signs are dismissed as benign side effects of life-stage transitions.

Method: A case report

Case Presentation: The patient, a 32-year-old multiparous mother (G2P2A0) and private sector employee, sought care following a persistent vaginal odor after IUD insertion—a common postpartum contraceptive choice. From a social standpoint, she presented no traditional risk factors: she maintained a monogamous marriage and had a history of regular, negative Pap smears. The clinical assumption leaned toward a localized reaction to the IUD. However, diagnostic escalation revealed a dual infection of HR-HPV 16 and 18 and CIN 1. This diagnosis introduced a significant psychological and social burden, as the patient had to reconcile her "low-risk" lifestyle with the presence of high-risk oncogenic genotypes.

Discussion: The case provides a unique perspective on how post-IUD malodor—often dismissed as a minor side effect of bacterial shifts—can serve as a crucial diagnostic "red flag." We discuss the necessity of clinicians utilizing contraceptive follow-ups as a window for comprehensive cervical evaluation. The erosi (erosion) noted during the IUD check was the pivot point from routine contraception to oncology. A critical debate in this discussion is the management of CIN 1 when high-risk genotypes are present. While current guidelines suggest a conservative "wait and see" approach (monitoring for spontaneous regresi), the presence of types 16 and 18 introduces a socio-psychological burden and a higher clinical risk of progression. We argue for a "High-Vigilance Conservatism".

Conclusion: This case advocates for the de-stigmatization of HPV and the universalization of DNA testing. It proves that even a "model patient" in a stable marriage can harbor high-risk infections. Clinicians must look beyond a patient's social profile and obstetric history, treating complaints like post-contraceptive malodor as valid entry points for comprehensive oncologic screening to prevent the progression of silent CIN 1.

Keywords: IUD, post partum, CIN 1

Abortus Medicinalis in Uncorrected TOF Pregnancy: Integrated Obstetric-Social Strategy to Reduce Maternal Mortality

Maria G. Tania¹, Nugrahanti Prasetyorini², I Wayan Agung Indrawan³

¹Resident, Dept. of Obstetrics & Gynecology, Dr. Saiful Anwar Hospital Malang – Universitas Brawijaya

²Fetomaternal Division, Dept. of Obstetrics & Gynecology, Dr. Saiful Anwar Hospital Malang – Universitas Brawijaya

³Social Obstetrics Division, Dept. of Obstetrics & Gynecology, Dr. Saiful Anwar Hospital Malang – Universitas Brawijaya

ABSTRACT

Background: Pregnancy in women with uncorrected Tetralogy of Fallot (TOF) is classified as extremely high risk (modified WHO class IV) with significant maternal mortality. This reflects gaps in integrated reproductive health services, particularly in preconception counselling and risk awareness.

Case: A 31-year-old primigravida at 18–20 weeks with uncorrected TOF presented with chronic hypoxemia and recurrent syncope. Despite known congenital heart disease, no preconception counselling had been provided. After referral to a tertiary center, the patient was classified as mWHO class IV. Following multidisciplinary evaluation and ethics approval, the case was managed as abortus medicinalis due to extremely high maternal risk. Cervical ripening with laminaria followed by oxytocin induction was performed. A combined spinal-epidural (CSE) low-dose technique was applied to maintain hemodynamic stability and prevent worsening of right-to-left shunting. The patient was managed under intensive care monitoring. A male fetus weighing 135 grams was delivered (APGAR 0), with no maternal cardiovascular complications.

Discussion: This case underscores gaps in preventive reproductive care and the need for timely risk stratification and multidisciplinary management. Delayed access and sociocultural factors contributed to disease progression. ESC guidelines contraindicate pregnancy in mWHO class IV, supporting early termination to prevent maternal mortality.

Conclusion: Reducing maternal mortality requires strengthening integrated reproductive health services, improving access to preconception counselling, and implementing ethically guided multidisciplinary care.

Keywords: Tetralogy of Fallot, high-risk pregnancy, abortus medicinalis, maternal mortality, reproductive health integration

Fatal Convergence: Septic Shock, HIV Treatment Interruption, and Intrauterine Fetal Death in Mid-Trimester Pregnancy—A Catastrophic Case Report

Aulia Astari¹, Nugrahanti Prasetyorini², Adin Yan Permana³

¹Resident, Department of Obstetrics & Gynecology, Dr. Saiful Anwar Hospital Malang – Universitas Brawijaya,

²Fetomaternal Medicine Division, Department of Obstetrics & Gynecology, Dr. Saiful Anwar Hospital Malang – Universitas Brawijaya,

³Social Obstetrics & Gynecology Division, Department of Obstetrics & Gynecology, Dr. Saiful Anwar Hospital Malang – Universitas Brawijaya

ABSTRACT

Background: Septic shock during pregnancy remains a leading cause of maternal mortality worldwide, particularly in low-resource settings and among immunocompromised patients. Human Immunodeficiency Virus (HIV) infection, especially with antiretroviral therapy (ART) interruption, significantly increases susceptibility to severe infections and poor obstetric outcomes, including intrauterine fetal death (IUFD) and multi-organ failure.

Case Presentation: We report a case of a 29-year-old multigravida (G2P1001) at 24–26 weeks of gestation referred with intrauterine fetal death and suspected septic shock. The patient had a 10-year history of HIV infection and discontinued ART four months prior due to persistent nausea and vomiting. She presented with gastrointestinal symptoms, progressive weakness, and altered mental status. On admission, she was in critical condition with hypotension (73/52 mmHg), tachycardia, oliguria, and decreased consciousness (GCS 3-4-5). Laboratory findings revealed anemia (Hb 8.8 g/dL), thrombocytopenia (62,000/ μ L), leukocytosis (15,460/ μ L), severe hypoglycemia (GDS 35 mg/dL), azotemia (urea 141 mg/dL, creatinine 3.71 mg/dL), transaminitis (AST 552 U/L, ALT 136 U/L), hypoalbuminemia (1.24 g/dL), and metabolic acidosis. Coagulation profile and D-dimer (7.14 μ g/mL) suggested overt disseminated intravascular coagulation (DIC score = 5). Ultrasound confirmed IUFD with estimated fetal weight of 468 grams. Despite aggressive resuscitation, including vasopressor support, glucose correction, and advanced life support, the patient developed cardiac arrest. Return of spontaneous circulation (ROSC) was briefly achieved, but she deteriorated and was pronounced dead shortly thereafter.

Discussion: This case highlights the synergistic impact of HIV-related immunosuppression, ART discontinuation, and delayed presentation, culminating in overwhelming sepsis, DIC, and multi-organ dysfunction. Pregnancy further exacerbates immune dysregulation, increasing vulnerability to septic progression. IUFD in this context likely reflects placental hypoperfusion and systemic inflammatory response. Early recognition, strict ART adherence, and multidisciplinary management are critical to improving outcomes.

Conclusion: Septic shock in pregnancy complicated by untreated HIV infection carries an extremely high risk of maternal and fetal mortality. Strengthening antenatal surveillance, ensuring ART continuity, and early referral are essential strategies to prevent catastrophic outcomes.

Keywords: septic shock, pregnancy, HIV, intrauterine fetal death, disseminated intravascular coagulation, maternal mortality

Beyond Obstetric Risk: Clinical Complexity and Multidisciplinary Management of Teenage Pregnancy at a Tertiary Referral Center

Indira Laksmitha Yasmine Mulyowahyudi¹, J.M, Seno Ajie²

Obstetrics and Gynecology Resident Doctor, Department of Obstetrics and Gynecology, RSCM-FKUI, Jakarta

Social Obstetrics Division, Department of Obstetrics and Gynecology, RSCM-FKUI, Jakarta

ABSTRACT

Background: Teenage pregnancy remains a significant challenge in obstetric care because it is associated with increased clinical risk, psychosocial vulnerability, and ethical complexity compared with pregnancy in adults. In tertiary referral settings, adolescent pregnancies are often accompanied by nutritional problems, infection, mental health concerns, unplanned conception, and difficult decision-making processes that require multidisciplinary care.

Objective: To describe the clinical profile, psychosocial issues, and multidisciplinary management approach among teenage pregnancy cases discussed in a holistic-ethics forum at a tertiary referral center.

Methods: This was a retrospective descriptive case series of pregnant adolescents aged 13–19 years discussed in a multidisciplinary holistic-ethics forum between March 2024 and March 2026. Variables reviewed included maternal age, gestational age, marital status, pregnancy intention, obstetric and medical comorbidities, and recommendations from the forum discussion. Data were analyzed descriptively.

Results: A total of 9 teenage pregnancy cases were included, with ages ranging from 13 to 19 years and a median age of 16 years. Most patients were younger than 18 years old, accounting for 77.8% of cases. Unplanned pregnancy was documented in 77.8%, while 66.7% of patients were unmarried. The most frequent clinical problem was anemia and/or iron deficiency, found in 77.8% of cases. Nutritional compromise, including underweight, hypoalbuminemia, or poor maternal weight gain, was present in 55.6%. Genital tract infection-related conditions were identified in 33.3%, hyponatremia in 22.2%, and fetal growth problems, including intrauterine growth restriction or small-for-gestational-age fetus, in 22.2%. Psychiatric or major psychosocial problems requiring specialist consultation were documented in 22.2%, while postpartum or post-cesarean complications were also observed in 22.2%. Management recommendations consistently extended beyond obstetric stabilization to include psychiatric consultation, reproductive health counseling, family counseling, close antenatal surveillance, postpartum contraceptive planning, and ethical consideration of patient autonomy and decision-making capacity.

Conclusion: Teenage pregnancy at a tertiary referral center demonstrates a complex interplay of obstetric, nutritional, infectious, psychosocial, and ethical issues. A holistic, patient-centered, and multidisciplinary approach is essential to improve maternal safety, pregnancy outcomes, and reproductive decision-making in this vulnerable population.

Keyword: teenage pregnancy; high-risk obstetrics; ethics; multi-disciplinary care

The Effectiveness of Condom Use in Preventing HIV/AIDS among High-Risk Populations: A Bibliometric

Siti Lisdia Nur Ranni, Cesa Septiana Pratiwi
University 'Aisyiyah Yogyakarta, Ringroad Utara No. 63, Region of Yogyakarta
nuranidian96@gmail.com

ABSTRACT

Background: HIV/AIDS remains a significant global health problem with consistently high rates infection rates and relatively stagnant trends in recent years. Condoms are recognized as a majoreffective, affordable, and accessible preventive methods; however, their use remains inconsistent, particularly among high-risk populations. Therefore, a comprehensive analysis is needed to map the development of research on condom effectiveness as a strategy for HIV/AIDS prevention.

Methods: This study employed a bibliometric design using the PRISMA 2020 approach. Data were extracted from the Dimensions covering the period 2020–2026. A total of 5,212 articles fulfilled the inclusion criteria. Data were analyzed using VOSviewer to examine publication trends and citation patterns, leading authors, key journals, and to visualize co-occurrence and co-authorship networks.

Results and Discussion: The findings revealed 5,211 publications with a total of 51,074 citations, indicating a significant increase in research trends, particularly during 2024–2025. Major contributing journals included AIDS and Behavior, PLOS ONE, and BMC Public Health. The visualization results indicated that research topics are still dominated by behavioral and epidemiological aspects, while the integration of social, cultural, and structural factors remains limited. Although condoms are proven to be an effective preventive strategy, their effectiveness is strongly influenced by consistent use and contextual factors.

Conclusion: This study highlights that condom effectiveness remains a critical focus in HIV/AIDS prevention; however, more comprehensive strategies are required. Suggested interventions include strengthening community-based education, improving condom accessibility, and integrating condom use with other strategies such as PrEP and socio-cultural approaches to enhance consistent utilization.

Keywords: Effectiveness of Condom Use, Preventing HIV/AIDS, High-Risk Populations

A Sentinel Case of Undiagnosed Congenital Heart Disease in Pregnancy: A Preventable Adverse Outcome

Andreas Tedi S. Karo Karo, Bambang Rahardjo
Department of Obstetrics and Gynecology, RSSA Malang, Indonesia

ABSTRACT

Background: Adverse maternal and perinatal outcomes in high-risk pregnancies are not solely determined by underlying medical conditions, but are often shaped by preventable social and health system failures. Sentinel cases provide critical insight into gaps in healthcare delivery. In low-resource settings, failure in early detection, risk stratification, and timely referral remains a major contributor to preventable adverse outcomes.

Case: A 27-year-old woman, G3P0010A100 at 24–26 weeks of gestation, presented with fever, progressive dyspnea, and palpitations. She had a history of untreated heart disease since childhood, discontinued due to financial limitations. Her condition rapidly and critically deteriorated into cardiogenic shock with suspected sepsis and recurrent ventricular tachycardia requiring multiple cardioversions. Echocardiography confirmed Ebstein anomaly with secundum atrial septal defect. Despite intensive multidisciplinary management, the pregnancy could not be sustained. The patient developed imminent preterm labor and delivered an extremely preterm infant at 24–26 weeks of gestation, weighing 675 grams, with extremely poor neonatal viability, who died shortly after birth. Despite frequent antenatal visits, effective high-risk identification was not achieved.

Discussion: This case represents a sentinel event reflecting preventable system-level failure. This case not only reflects delayed care, but also highlights a systemic failure in early risk identification and continuity of care. Financial barriers, inadequate risk recognition, and delayed referral pathways collectively contributed to disease progression and adverse outcomes. The presence of the three delays highlights systemic weaknesses in access, quality, and continuity of care. This reflects not only delayed care, but also a failure of integration across levels of the healthcare system. Importantly, frequent antenatal visits without effective screening do not ensure safe outcomes.

Conclusion: This sentinel case underscores that adverse outcomes in high-risk pregnancies are often preventable and driven by modifiable system failures. Strengthening early risk detection, improving continuity of care, and integrating multidisciplinary and social health approaches are essential to improve maternal and perinatal outcomes. Sentinel events such as this should serve as a trigger for system-level evaluation and policy reform in maternal health services.

Keywords: Sentinel case, congenital heart disease, Ebstein anomaly, three delays, health system gaps

Abnormal Uterine Bleeding in a Postmenopausal Woman Misinterpreted as Normal Menstruation: Cases Serial Highlighting Knowledge Gaps in Elderly Women

Ryan Fahreza Munir¹, Naura Andini Fadhila², Yuniar Kumalasari³

¹PKU Muhammadiyah Jatinom Hospital, Yogyakarta

²Caringin Primary Health Center, Tangerang Regency

³Bagas Waras State Hospital, Yogyakarta

ABSTRACT

Background: Postmenopausal bleeding is an abnormal clinical finding that requires prompt evaluation, as it may indicate underlying pathology, including endometrial malignancy. Despite its clinical significance, misconceptions regarding the persistence or recurrence of menstruation in elderly women may lead to misinterpretation of symptoms and delayed healthcare-seeking behavior. This highlights an important gap in health literacy among postmenopausal populations.

Case Report: We report cases of elderly postmenopausal women, sampled with most recent three patient in the setting of Primary Health Care, presented with recurrent vaginal bleeding over several months, which initially misinterpreted as a return of normal menstruation, resulting in delayed medical consultation. The patient clinical evaluation was histopathological examination after examining symptoms, abnormal uterine bleeding was revealed. Patients subsequently underwent IVA and PAP smear serial check-up, alongside consulting, with better outcomes and better understanding, towards the patient and their families.

Discussion: This case highlights the impact of limited health literacy on the interpretation of abnormal gynecological symptoms. Misconception of postmenopausal bleeding as physiological may delay diagnosis and management, potentially worsening clinical outcomes. Increased awareness and patient education are essential to promote timely medical evaluation.

Conclusion: Any vaginal bleeding after menopause should be considered pathological until proven otherwise. Addressing knowledge gaps among elderly women is crucial to facilitate early presentation and improve clinical outcomes.

Clinical Characteristics and Management Patterns of Holistic Obstetric and Gynecologic Cases at a National Referral Hospital in Indonesia: A Retrospective Descriptive Study (2024–2025)

Kristian Alda, Omo A. Madjid, Dwiana Ocviyanti, Junita Indarti, Seno Adjie, IPG Kayika, Arietta Puspongoro,
Department of Obstetrics and Gynecology, Faculty of Medicine Universitas Indonesia / RSUPN Dr. Cipto Mangunkusumo, Jakarta, Indonesia

ABSTRACT

Background: Holistic obstetric and gynecologic care integrates biological, psychological, and social dimensions, which is essential in managing complex cases in tertiary referral settings. However, real-world data describing clinical patterns and multidisciplinary decision-making remain limited, particularly in low- and middle-income countries.

Materials and Methods: A retrospective analytical study was conducted including all cases discussed in a holistic obstetrics and gynecology clinic between January 2024 and December 2025. Variables included patient age, case type, diagnosis, and clinical categories. Cases were further classified into psychosocial-related, medically complex, and ethically complex groups. Descriptive statistics were used, and bivariate analysis with chi-square test was performed. Effect size was assessed using Cramer's V.

Results: A total of 100 cases were analyzed, with a mean age of 27.6 ± 8.4 years. Most cases were obstetric (98%). The most frequent categories were pregnancy with cancer (29%), unplanned pregnancy (24%), and teenage pregnancy (11%). Psychosocial-related conditions accounted for 52% of cases, while medically complex conditions contributed to 40%. Bivariate analysis showed a significant association between age and clinical category ($p < 0.001$), with teenage pregnancy predominantly occurring in patients aged <20 years and cancer in pregnancy more common in older patients. Psychosocial conditions were significantly associated with younger age groups ($p = 0.002$), while ethically complex cases were more likely to require multidisciplinary management ($p = 0.001$), indicating clinically meaningful associations.

Conclusion: Holistic obstetric and gynecologic practice in a tertiary referral hospital is characterized by complex cases involving both medical and psychosocial factors. Multidisciplinary collaboration is essential to optimize individualized and patient-centered care.

Keywords: holistic care; high-risk pregnancy; multidisciplinary approach; pregnancy with cancer; psychosocial vulnerability

Delayed in Accessing Post-Sexual Violence Service: Clinical Implications and System Gaps in Managing Victims in Obstetric and Gynecology Services: A Case Report Study

Ardiraz Fides Khairunnisa¹, Raz Fides Umi Rahmawati²

¹Intern medical doctor in Departement of Obstetric and Gynecology of Medical Faculty UIN Sunan Ampel Surabaya

²Departement of Obstetric and Gynecology of Medical Faculty UIN Sunan Ampel Surabaya

ABSTRACT

Background and purpose: Sexual violence is one of global reproductive health problem with high prevalence and multidimensional impacts. Emergency contraception and HIV prophylaxis are recommended within the first 72 hours and pregnancy prevention within 5 days. However, delayed in accessing service are commonly be found and impacting the clinical outcomes. This case report study is aiming to analyze the clinical implications and gaps in the service system associated with delayed presentation in victims of sexual violence. Sexual violence can have long-term, debilitating effects on the mental health of victims. The provision of support from healthcare facilities can help to alleviate some of long-term effects of sexual violence, with a need for competent and compassionate healthcare professionals. To explore these issues further, this review focused on the first point of contact women's interations with healthcare services who have been sexually assaulted, in order to identify how care can be improved for survivors of sexual violence in Indonesia at this crucial time.

Case: A 22-year-old, unmarried woman, is registered as outpatient in departement obstetrics and gynecology clinic at Siti Hajar Islamic Hospital in Sidoarjo with concerns about pregnancy after experiencing sexual violence with her partner two weeks prior to the complaint. The patient complaining with the present of lower abdominal pain, nausea, and a history of post-coital bleeding. Urine pregnancy test was negative.

Methods: Comprehensive evaluation was performed, including pregnancy assement, Sexual Transmitted Infection (STI) screening, and trauma-informed counseling addressing both medical and psychosocial aspects.

Discussion: There is no pregnancy detected on initial evaluation. Delayed presentation beyond the recommended window period limited the effectiveness of time sensitive interventions such as emergency contraception (less than 72 hours) and optimal STI (Sexual Transmitted Infection) prophylaxis. This issue also reducing medicolegal value of findings. The patient remained at risk for STI and psychological sequelae, including post-traumatic stress disorder (PTSD) and depression.

Conclusions: Delayed access to post-sexual assault care could significantly impact the clinical outcomes and limiting the effectiveness of presentative interventions. Strengthening integrated care systems, improving public awareness and implementing multidisciplinary, evidence-based approaches are essential to optimize reproductive health and psychosocial outcomes in survivors.

Keyword: Unmarried woman, sexual violence, delayed treatment, case control, Sidoarjo

“MMS: Solutions for Stunting Problems or Just Changing Supplements?”

Nita Tri Kurniati
RS PKU Muhammadiyah Karanganyar

ABSTRACT

Background: Prevalence of stunting among children under five in Indonesia remains high, 19.8% (2024) while National target is 14%. It is partly triggered by chronic undernutrition during pregnancy. To improve maternal nutrition, WHO has recommended Multiple Micronutrient Supplements (MMS) programs to replace Iron-Folic Acid (IFA) tablets since 2020. Indonesia began implementing MMS in 2024 through Ministry of Health Decree No. HK.01.0/MENKES/1092/2024 across 209 districts/cities. However, questions arise: is MMS program truly a solution for stunting or merely a substitute for IFA?

Objective: To analyze the role of MMS as a stunting intervention and its limitations compared to IFA.

Methods: Literature Review of Ministry of Health policies, WHO/UNICEF guidelines.

Results: Each MMS tablet contains 10 vitamins and 5 minerals including 30 mg of iron and folic acid, which is more comprehensive than IFA containing only 60 mg of iron and folic acid. Meta- analyses show MMS reduces the risk of low birth weight by 18%, preterm birth, and infant mortality compared to IFA, contributing to stunting prevention. However, MMS has limitations: lower iron dosage means women with severe anemia still require additional IFA, it does not contain calcium and DHA, and it cannot replace a nutritious diet. Adherence to 180 days of consumption and equitable distribution also remain implementation challenges.

Conclusion: MMS is a step forward from IFA as it is proven more effective in improving pregnancy outcomes related to stunting. Nevertheless, MMS is not a single solution. Its effectiveness depends on integration with balanced nutrition, food supplementation, education, and additional supplements as indicated. Without comprehensive interventions, MMS risks being only a supplement substitution.

Keywords: MMS, stunting, pregnant women, iron-folic acid, micronutrients

Ruptured Left Tubal Ectopic Pregnancy with Massive Hemoperitoneum and Hemorrhagic Shock in a Woman with Irregular Three-Month Injectable Contraceptive Use: A Case Report

dr. Griffin Mia Inggita Kusno MARS., Dr. dr. Laksmi Maharani, Sp. OG, Subsp. KFM (K)
Rumah Sakit Pertamina Jaya, Jakarta, Indonesia

ABSTRACT

Background: Ectopic pregnancy is a life-threatening obstetric emergency. Delayed diagnosis may result in tubal rupture, massive hemoperitoneum, and hemorrhagic shock. Irregular contraceptive use may reduce pregnancy awareness and contribute to delayed presentation.

Case: A 30-year-old woman, G4P3A0, presented with progressive abdominal pain, syncope, weakness, vomiting, and diaphoresis. She reported irregular use of three-month injectable hormonal contraception with unscheduled reinjection intervals. Vaginal bleeding was initially interpreted as menstruation. On arrival, blood pressure was 54/33 mmHg with diffuse abdominal tenderness and guarding. Urine pregnancy test was positive. Ultrasonography demonstrated an 8–9-week extrauterine pregnancy with free intraperitoneal fluid. Emergency laparotomy revealed ruptured left tubal ectopic pregnancy with approximately 1000 mL intra-abdominal blood clot. Left salpingectomy and hemoperitoneum evacuation were performed. The patient required transfusion, vasopressor support, mechanical ventilation, and postoperative ICU care. She was extubated on postoperative day one and discharged in improved condition on day four.

Conclusion: Ruptured ectopic pregnancy can occur in women with irregular injectable contraceptive use. Pregnancy testing should be performed promptly in reproductive-age women presenting with abdominal pain or shock regardless of contraceptive history.

Keywords: ectopic pregnancy, hemorrhagic shock, hemoperitoneum, injectable contraception, ICU

Placental Migration from Total to Marginal Placenta Previa in an Obese Primigravida Resulting in Favorable Term Cesarean Delivery: A Case Report

dr. Griffin Mia Inggita Kusno MARS., dr. Gustaf Irianto Sp.OG
Rumah Sakit Pertamina Jaya, Jakarta, Indonesia

ABSTRACT

Background: Placenta previa is associated with antepartum hemorrhage, preterm birth, and operative delivery. Serial ultrasonography may demonstrate placental migration during pregnancy, altering delivery planning. Maternal obesity may further complicate obstetric management.

Case: A 26-year-old primigravida at 37–38 weeks of gestation with body weight 82.5 kg and height 152 cm (BMI 35.7 kg/m²) was admitted for planned cesarean delivery. Earlier antenatal ultrasonography showed total placenta previa, which later changed to marginal placenta previa on follow-up examination. She had no antepartum bleeding during pregnancy and was routinely followed by an obstetrician since February 2026. Elective cesarean section under spinal anesthesia was performed. Intraoperative blood loss was approximately 100 mL without surgical complication. Maternal postoperative recovery was uneventful. The newborn had good clinical condition and roomed-in with the mother. The patient was discharged in stable condition on postoperative day four.

Discussion: This case highlights the importance of serial imaging in placenta previa because placental migration may occur as the lower uterine segment develops. Accurate reassessment can optimize timing and mode of delivery. Despite obesity as an additional risk factor, favorable maternal and neonatal outcomes were achieved through regular antenatal care and planned cesarean delivery.

Conclusion: Placental migration from total to marginal placenta previa can occur and significantly influence obstetric management. Continuous antenatal surveillance and individualized delivery planning are essential for optimal outcomes.

Keywords: placenta previa, placental migration, obesity, primigravida, cesarean section

Between Life and Death, a Family Stands: Are Pregnancy Companions' Knowledge of Danger Signs and Birth Preparedness and Complication Readiness Associated? A Cross-Sectional Study

Aisha Fairuz Zahira¹

¹Primary Health Care Center Berbek, Nganjuk, Indonesia

ABSTRACT

Background: High maternal mortality remains a global challenge, including in Indonesia, often linked to the “three delays” in recognizing and responding to obstetric emergencies. The pregnant woman’s companion, most often the husband, plays a key role in these situations. This study aims to examine the association between the companion’s knowledge of pregnancy danger signs and their preparedness for obstetric emergencies.

Methods: A cross-sectional study was conducted among 56 pregnancy companions at Berbek Primary Health Center, Nganjuk, using consecutive sampling from December 2025 to January 2026. Data were collected using a validated true-false questionnaire on pregnancy danger signs and a JHPIEGO-based Likert scale for BPCR. Data were analyzed using the Chi-Square test ($\alpha=0.05$), following ethical approval from RSUD Nganjuk.

Results: Among 56 respondents, mostly husbands (80%), 30.4% had good knowledge, 50% moderate, and 19.6% poor, while preparedness was split evenly. Better knowledge was significantly linked to better preparedness ($p=0.009$). Despite a high willingness to accompany mothers during emergencies (mean score 4.5), critical gaps exist, with only 35.7% recognizing bleeding as a danger sign and financial readiness scoring the lowest (mean 3.1). These gaps may arise from misinterpreting late-pregnancy bleeding as a normal sign of labor rather than life-threatening emergency, highlighting the need to involve husbands and families more actively in antenatal care and maternal education.

Conclusion: There is a significant correlation between a companion's knowledge of pregnancy danger signs and their BPCR. Strengthening the involvement of husbands and families in Antenatal Care (ANC) and maternal classes is essential to ensure effective BPCR and reduce maternal risks.

Keywords: Pregnancy danger signs, Birth preparedness and complication readiness, Pregnancy companions

Atypical Eclampsia without Hypertension Presenting as Dyspepsia: A Diagnostic Challenge

dr. Cika Hanandiya¹, dr. Utami Rizalvi², dr. Akbar Rahmat, Sp. OG³

¹General Practitioner, Rina Medika Clinic, Bekasi, West Jawa, Indonesia

²General Practitioner, Asysyifaa Hospital, Bogor, West Jawa, Indonesia

³Obstetric and Gynecology Departemen, Asysyifaa Hospital, Bogor, West Jawa, Indonesia

ABSTRACT

Background: Eclampsia is a severe complication of preeclampsia characterized by seizures and contributes significantly to maternal and perinatal morbidity and mortality. Although typically associated with hypertension, some cases occur without elevated blood pressure, leading to potential diagnostic delay.

Case Presentation: A 28-year-old primigravida at 35–36 weeks gestation presented with epigastric pain, nausea, vomiting, and dizziness without hypertension. Initial blood pressure was 130/80 mmHg. The patient was initially managed as a gastrointestinal disorder. Six hours later, she developed headache, visual disturbances, and a generalized tonic-clonic seizure. Urinalysis revealed proteinuria +3, confirming eclampsia. She was treated with magnesium sulfate and underwent emergency cesarean section. Two hours postpartum, recurrent seizure occurred and was managed appropriately.

Discussion: This case highlights atypical eclampsia without hypertension presenting as dyspepsia, which may lead to misdiagnosis. Recognition of prodromal symptoms such as epigastric pain, headache, and visual disturbances is crucial. Prompt management is essential to prevent complications.

Conclusion: Eclampsia without hypertension poses a diagnostic challenge and requires high clinical suspicion to avoid delay in treatment.

Keywords: eclampsia, normotensive, epigastric pain, seizure, pregnancy

Giant Condyloma Acuminata pada Kehamilan: Kompleksitas Multidimensional antara Risiko Klinis, Stigma Sosial, dan Dilema Etik dalam Pengambilan Keputusan Obstetri

Novita Nurul K¹, Moh. Nailul Fahmi², Irwan Taufiqur Rachman³

¹ Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan, Universitas Gadjah Mada, Yogyakarta, Indonesia

² Departemen Obstetri dan Ginekologi, Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan, Universitas Gadjah Mada – Rumah Sakit Dr. Sardjito, Yogyakarta, Indonesia

Korespondensi: novitanurul2@gmail.com/081222205963

ABSTRAK

Latar Belakang: Kondiloma akuminata merupakan manifestasi infeksi Human Papillomavirus (HPV) yang dapat mengalami pertumbuhan progresif selama kehamilan akibat perubahan hormonal dan imunologis. Lesi dapat berkembang menjadi ukuran besar (giant condyloma acuminata) yang menimbulkan tantangan klinis, seperti risiko obstruksi jalan lahir, perdarahan, serta kompleksitas dalam pelaksanaan. Kondisi ini juga menghadirkan dilema sosioetik yang multidimensional, meliputi keseimbangan kepentingan maternal–janin, otonomi pasien dalam pengambilan keputusan, stigma terhadap infeksi menular seksual, serta keterbatasan akses layanan kesehatan sehingga diperlukan pendekatan multidimensional yang komprehensif dalam menentukan tatalaksana yang optimal.

Kasus: Seorang perempuan 20 tahun, G1POA0 Hamil 39 Minggu dengan riwayat Giant Condyloma Acuminata Vulvovagina. Pasien menjalani eksisi lesi (elektrofulgurasi) pada usia kehamilan 31 minggu, namun tindakan tidak optimal akibat peningkatan denyut jantung janin yang mengarah pada kecurigaan fetal distress, sehingga masih terdapat lesi residu berupa papul verukosa multipel pada labia. Pemeriksaan histopatologi mengonfirmasi kondiloma akuminata. Adanya lesi residu yang berpotensi menimbulkan perdarahan saat persalinan pervaginam, trauma lesi, infeksi sekunder, serta rekurensi dini menjadi dasar perencanaan terminasi kehamilan melalui seksio sesarea.

Pembahasan: Tatalaksana kondiloma akuminata pada kehamilan umumnya bersifat konservatif, dan seksio sesarea tidak direkomendasikan secara rutin. Kasus ini mencerminkan konflik multidimensional dalam pengambilan keputusan, sehingga memerlukan pendekatan multidisiplin yang mempertimbangkan aspek klinis, psikologis, dan sosial untuk mencapai luaran maternal dan neonatal yang optimal. Selain itu, pentingnya integrasi layanan promotif dan preventif, meliputi edukasi kesehatan reproduksi, konseling prakonsepsi, skrining infeksi menular seksual, serta vaksinasi HPV menjadi kunci dalam menurunkan risiko kekambuhan dan meningkatkan kesehatan reproduksi perempuan secara menyeluruh.

Kesimpulan: Giant Condyloma Acuminata pada kehamilan mencerminkan kompleksitas tantangan klinis dan dilema sosioetik. Oleh karena itu, pengambilan keputusan obstetri memerlukan pendekatan multidimensional yang menyeimbangkan kepentingan maternal–janin dengan mempertimbangkan aspek klinis, psikologis, dan sosial, serta mengedepankan keterlibatan aktif pasien melalui pendekatan patient-centered care dan shared decision making untuk mencapai luaran yang optimal

Kata Kunci: Giant Condyloma Acuminata; Human Papillomavirus (HPV)

Mengintegrasikan Peran Klinis dalam Paradigma Obstetri dan Ginekologi Sosial: Strategi untuk Menjaga Relevansi dan Keutuhan Peran Dokter Spesialis

Edy Mustofa

Pendahuluan: Ancaman Penyempitan Peran dan Peluang Integrasi

Dokter Spesialis Obstetri dan Ginekologi (SpOG) yang mendalami sub-spesialisasi Obstetri Ginekologi Sosial (OGS) berisiko mengalami dilema identitas profesional. Di satu sisi, mereka dipanggil untuk menjawab tantangan kesehatan reproduksi yang kompleks dan multidimensional—seperti ketimpangan akses, determinan sosial kesehatan, kekerasan berbasis gender, dan advokasi kebijakan. Di sisi lain, tekanan sistemik dunia kedokteran, seperti beban administratif, tuntutan produktivitas klinis murni, dan spesialisasi yang semakin teknis, dapat mendorong mereka untuk "melepas" peran klinis inti. Penyempitan peran ini bukan hanya kerugian individu, tetapi juga kehilangan besar bagi sistem kesehatan, karena menghilangkan sosok yang mampu menjembatani celah antara ranah medis-biologis dengan ranah sosial-kontekstual. Oleh karena itu, diperlukan strategi proaktif agar dokter OGS dapat menjadi "Klinisi-Strategis" yang mengintegrasikan, bukan meninggalkan, keahlian klinisnya.

Strategi 1: Menempatkan Keahlian Klinis sebagai Fondasi Otoritas dan Analisis Sosial

Keahlian klinis bukanlah hal yang harus dikurangi, melainkan aset intelektual utama yang membedakan dokter OGS dari pekerja sosial atau aktivis kesehatan masyarakat.

- Clinical Intelligence untuk Analisis Kebijakan: Kemampuan mendiagnosis komplikasi kehamilan atau kanker serviks harus diterjemahkan menjadi kemampuan menganalisis mengapa angka kejadiannya tinggi di suatu populasi. Seorang dokter OGS dapat menggunakan pemahaman patofisiologi pre-eklampsia untuk mendesain program skrining berbasis komunitas yang lebih efektif, atau menggunakan pengetahuannya tentang manajemen persalinan macet untuk menyusun protokol rujukan yang menyelamatkan nyawa di daerah terpencil. Strateginya: Dokter OGS harus aktif menyajikan data klinis (misal: prevalensi infeksi menular seksual pada remaja, atau kasus partus lama) dalam forum kebijakan sebagai "bukti medis" yang tak terbantahkan untuk mendorong intervensi sosial.

- **Credibility Through Competence:** Otoritas untuk berbicara tentang aborsi tidak aman, dampak perkawinan anak pada kesehatan panggul, atau trauma persalinan datang dari pengalaman langsung menangani pasien dengan kondisi tersebut. Kredibilitas ini yang membuka pintu ruang diskusi dengan legislator, pemuka agama, dan pemangku kebijakan. Strateginya: Pertahankan dan dokumentasikan praktik klinis yang relevan dengan fokus sosial (misal, klinik konseling pasca-keguguran, layanan kesehatan reproduksi bagi penyintas kekerasan) sebagai basis "laboratorium hidup" untuk advokasi.

Strategi 2: Membangun Model Praktik Klinis yang Secara Inheren Bersifat Sosial-Holistik

Alih-alih memisahkan waktu untuk "klinik" dan "sosial", rancang model praktik yang menyatu.

- Klinik sebagai Entry Point dan Learning Hub: Setiap konsultasi pasien bukan hanya masalah medis, tetapi juga kasus sosial mini. Seorang dokter OGS dapat mengintegrasikan skrining sederhana untuk kekerasan dalam rumah tangga, depresi postpartum, atau kerawanan pangan ke dalam anamnesis rutin. Strateginya: Kembangkan dan validasi toolkit skrining sosial sederhana (2-3 pertanyaan kunci) yang dapat digunakan dalam waktu 5 menit pada setiap kunjungan.

- **Multi-Disciplinary Team (MDT) Based Practice:** Dokter OGS harus memosisikan diri sebagai kapten tim dalam penanganan kasus kompleks. Bangun jaringan kolaborasi langsung dengan psikolog klinis, pekerja sosial medis, konselor laktasi, dan konsultan hukum. Dalam praktik ini, peran klinis dokter tetap sentral sebagai penanggung jawab utama medis, tetapi dikelilingi oleh dukungan

profesional lain yang ia koordinasikan. Strateginya: Dirikan atau bergabung dengan "Klinik Kesehatan Reproduksi Terpadu" yang mengadopsi model MDT, dimana dokter OGS adalah lead clinician.

· **Community-Oriented Primary Care in ObGyn:** Luangkan sebagian waktu klinis (misal, 1 hari per bulan) untuk outreach di puskesmas, pondok pesantren, atau pabrik. Kegiatan ini bukan charity semata, melainkan bagian dari praktik klinis untuk memahami konteks pasien dan mendeteksi masalah secara dini. Strateginya: Buat program klinik bergerak atau klinik khusus berbasis komunitas dengan topik spesifik (kesehatan reproduksi remaja, menopause) yang tetap menekankan pelayanan medis langsung.

Strategi 3: Merancang Jejaring dan Pengembangan Karir yang Memperkuat Dua Dunia

Struktur dukungan yang tepat dapat mencegah dokter OGS terisolasi.

· **Dual Mentorship:** Carilah dua mentor: satu dari bidang klinis sub-spesialisasi lain (misal, Fetomaternal atau Onkologi) untuk menjaga ketajaman klinis, dan satu dari bidang kesehatan masyarakat, hukum, atau kebijakan untuk memperdalam pendekatan sosial. Strateginya: Institusikan program mentoring formal di dalam perkumpulan profesi (HOGSI/POGI) untuk dokter OGS muda.

· **Hybrid Career Pathway:** Advokasikan pengakuan resmi untuk peran hybrid ini di institusi pendidikan (FK/Rumah Sakit Pendidikan). Ciptakan posisi seperti "Konsultan Kesehatan Reproduksi dan Kebijakan" atau "Direktur Klinik dan Kemitraan Sosial" di rumah sakit. Strateginya: Susun portfolio karir yang menunjukkan dampak ganda: publikasi di jurnal klinis dan policy brief; keberhasilan menurunkan angka infeksi dan meningkatkan akses layanan.

· **Niche Expertise yang Tidak Tergantikan:** Kembangkan keahlian klinis-spesifik di area yang sangat terkait dengan isu sosial. Contoh: menjadi ahli klinis fistula obstetrik sekaligus advokat untuk perbaikan akses persalinan aman; atau menjadi ahli onkologi ginekologi yang fokus pada skrining kanker serviks bagi populasi marginal. Posisi ini membuat peran klinis Anda vital dan langsung terhubung dengan misi sosial.

Kesimpulan: Dokter OGS sebagai "Penerjemah" dan "Pemadu"

Penyempitan peran klinis bukanlah tak terelakkan bagi dokter OGS. Justru, kekuatan terbesarnya terletak pada kemampuan untuk "menerjemahkan" penderitaan sosial menjadi diagnosa dan intervensi klinis yang tepat, sekaligus "memadukan" bukti klinis menjadi argumen sosial yang kuat. Dengan strategi di atas—menjadikan klinik sebagai basis otoritas dan inovasi, membangun model praktik holistik, dan merancang jalur karir hybrid—dokter OGS dapat mengukuhkan posisinya sebagai profesional yang unik dan sangat dibutuhkan. Mereka adalah garda terdepan yang memastikan bahwa kemajuan ilmu kebidanan dan kandungan tidak kehilangan hati nurani sosialnya, dan bahwa perjuangan untuk keadilan kesehatan reproduksi tetap berakar pada ilmu kedokteran yang solid. Dengan demikian, peran klinis tidak menyempit, melainkan bertransformasi dan berekspansi menjadi kekuatan perubahan yang lebih luas dan mendalam.

Evidence-Based Impact of Paternal Secondhand Smoke Exposure on Preterm Birth and Low Birth Weight: Supporting the Implementation of Peraturan Pemerintah Nomor 28 Tahun 2024

Belva B. Buana¹, Ario Danianto², Galang Asmara³

¹Pusat Kesehatan Masyarakat Babat, Kabupaten Lamongan, East Java, Indonesia

²Department of Obstetric and Gynaecology, Faculty of Medicine, University of Mataram, West Nusa Tenggara, Indonesia

³Department of Constitutional Law, Faculty of Law, University of Mataram, West Nusa Tenggara, Indonesia

ABSTRACT

Introduction: Despite declining global tobacco use reported by the World Health Organization, Indonesia shows rising male smoking rates, increasing secondhand smoke (SHS) exposure among pregnant women. This study aimed to evaluate the association between maternal SHS exposure during pregnancy and preterm birth (PTB), supporting Peraturan Pemerintah Nomor 28 Tahun 2024.

Methods: A systematic review and meta-analysis were conducted following PRISMA guidelines. PubMed, Cochrane Library, and ScienceDirect were searched for observational studies on SHS exposure during pregnancy and PTB. Pooled odds ratios (ORs) were calculated using a random-effects model.

Results and Discussion: Nine studies were included qualitatively, with seven eligible for meta-analysis. Maternal exposure to SHS during pregnancy was significantly associated with increased risk of PTB (pooled OR = 1.63; 95% CI: 1.30–2.05; $p < 0.001$). Moderate heterogeneity was observed ($I^2 = 52\%$). Across studies, the direction of effect was consistent, with most reporting a modest to moderate increase in PTB risk. Variability in effect size likely reflects differences in exposure assessment (self-report vs. objective measures), timing of exposure, and population characteristics.

Discussion: These findings reinforce a consistent association between prenatal SHS exposure and PTB. Biologically, tobacco-related toxins may induce placental hypoxia, oxidative stress, and systemic inflammation, contributing to premature labor. Given the high prevalence of malesmoking in Indonesia, household SHS exposure represents a significant and modifiable risk factor. The consistency of findings across diverse settings strengthens causal inference and highlights the population-level impact of domestic smoke exposure.

Conclusion: Paternal SHS exposure significantly increases the risk of preterm birth. Strengthening smoke-free household environments and reinforcing policies such as Peraturan Pemerintah Nomor 28 Tahun 2024 are essential to reduce preventable adverse birth outcomes.

Keywords: secondhand smoke, passive smoking, preterm birth, pregnancy, meta-analysis

An Evidence-Based Approach to Bartholinitis in Pregnancy within a Non-Marital Sexual Context: A Case Report from a Primary Healthcare Setting

Belva B. Buana¹, Alfian Nur Mujtahidin¹

¹Pusat Kesehatan Masyarakat Babat, Kabupaten Lamongan, Jawa Timur, Indonesia

ABSTRACT

Background: Bartholinitis is an infection of the Bartholin gland that may progress to abscess formation, with incision and drainage considered the standard treatment for abscess cases. In pregnancy, management requires careful consideration of maternal and fetal safety. Social and behavioral contexts, including non-marital sexual activity, may reflect underlying risk factors for genital infections.

Case Presentation: A 20-year-old primigravida in the third trimester presented with a painful swelling of the right labia majora. She was admitted to a primary healthcare facility and clinically diagnosed with bartholinitis. Conservative treatment was initiated with intravenous cefotaxime and oral metronidazole. After five days of hospitalization, the patient demonstrated significant clinical improvement, including reduced pain, decreased swelling, improved mobility, and decreased vaginal discharge.

Methods: An evidence-based approach was conducted through a systematic search of PubMed, Cochrane Library, and ScienceDirect for relevant literature published within the last 10 years. Eligible studies, including case reports, case series, and clinical reviews, were appraised to compare management strategies and outcomes.

Results and Discussion: Eight studies were included, predominantly case reports and small case series from various regions worldwide. The literature consistently identifies incision and drainage as the primary treatment for Bartholin abscess, while conservative management is reported in selected early or non-fluctuant cases. No reports described successful conservative management in pregnancy within primary healthcare. This case demonstrated complete clinical resolution with antibiotic therapy alone.

Conclusion: Conservative management may be effective for bartholinitis in pregnancy without abscess maturation.

Keywords: Bartholinitis, pregnancy, conservative management, primary healthcare

Knowledge, Attitudes, Behavior and Factors Influencing Adolescent Free Sex Among Midwifery Diploma Students in Palembang City

Dewi Zartika¹, Ingrid Helena¹, Firmansyah Basir², Ferry Yusrizal², Iche Andriyani³

¹Department of Obstetrics and Gynecology, Faculty of Medicine, University of Sriwijaya

²Division of Social Obstetrics and Gynecology, Department of Obstetrics and Gynecology,

³Faculty of Medicine, University of Sriwijaya

ABSTRACT

Background: Adolescents free sexual behavior is shaped by individual knowledge, attitudes, and factors influencing such as: social environments, including family, peers, and institutional contexts. This study examined the association between knowledge, attitudes, and other determinants with free sexual behavior among diploma midwifery students in Palembang, Indonesia.

Methods: A cross-sectional analytic study was conducted start from December 2024 across four midwifery diploma institutions. A total of 329 female students meeting inclusion criteria were recruited. Data were analyzed using Chi-square tests and multivariate logistic regression. Model performance was assessed with Harrell's C concordance and Somers' D statistics in STATA 15.

Results: Most respondents demonstrated good knowledge (80.9%) and positive attitudes (60.5%). Fourteen students (4.3%) reported free sexual experiences, including kissing (2.4%), necking (1.8%), petting (2.1%), and intercourse (3.0%). Attitudes were significantly associated with free sexual behavior (PR = 1.41; 95% CI: 1.13–1.76; $p < 0.001$), whereas knowledge was not. Significant bivariate factors included age, educational level, alcohol use, smoking, family permissiveness, poor communication, peer influence, media exposure, religiosity, and institutional regulations. In multivariate analysis, smoking (PRAdj = 12.68; $p = 0.003$), peer invitation to consume alcohol (PRAdj = 14.11; $p < 0.001$), and peer persuasion to engage in sexual behavior (PRAdj = 1.94; $p < 0.0001$) remained independent predictors.

Conclusion: While knowledge was not directly associated, permissive attitudes, smoking, and peer influence—particularly alcohol consumption and peer persuasion—were the strongest determinants of premarital sexual behavior. These findings highlight the importance of peer-based and lifestyle-focused interventions in reproductive health promotion.

Keywords: Knowledge; Attitudes; Premarital Sexual Behavior; Midwifery Students.

Kehamilan Ektopik Terganggu yang Tidak Terdiagnosis pada Pasien dengan Low-Grade Squamous Intraepithelial Lesion: Laporan Kasus

M. Alfadilla Akbar, Irawan Sastradinata, Hartati, Ismail Hadyathma
Program Studi Obstetri dan Ginekologi, Fakultas Kedokteran Universitas Sriwijaya, RSUP Dr.
Mohammad Hoesin Palembang, Indonesia

ABSTRAK

Latar Belakang: Low-grade squamous intraepithelial lesion (LGSIL) merupakan kelainan epitel serviks yang umumnya bersifat ringan dan berkaitan dengan infeksi human papillomavirus. Keberadaan kondisi ginekologi lain secara bersamaan dapat mengaburkan diagnosis dan menunda identifikasi kondisi akut seperti kehamilan ektopik.

Kasus: Seorang wanita 27 tahun dengan keluhan keputihan kronis didiagnosis ASC-US yang berkembang menjadi LGSIL berdasarkan kolposkopi. Ultrasonografi menunjukkan massa adneksa kiri yang dicurigai sebagai hematokel atau salpingitis. Menjelang tindakan LEEP, pasien mengalami nyeri perut bawah. Pemeriksaan lanjutan menunjukkan tes kehamilan positif dengan kadar β -hCG 242,52 mIU/mL tanpa gambaran kehamilan intrauterin. Laparotomi menemukan ruptur kehamilan ektopik tuba kiri disertai hemoperitoneum. Dilakukan salpingektomi kiri dan kistektomi ovarium kanan. Pemeriksaan histopatologi mengonfirmasi kehamilan ektopik, LGSIL serviks, dan kista luteal hemoragik.

Pembahasan: Kasus ini menunjukkan pentingnya kewaspadaan klinis terhadap kemungkinan kehamilan ektopik pada wanita usia reproduktif, meskipun terdapat diagnosis ginekologi lain seperti LGSIL. Temuan awal berupa massa adneksa seharusnya mendorong evaluasi lebih lanjut terhadap kemungkinan kehamilan, termasuk pemeriksaan β -hCG. Keterlambatan diagnosis kemungkinan disebabkan oleh fokus klinis pada lesi serviks. Secara patofisiologis, riwayat servisititis kronis dapat menyebabkan inflamasi ascenden yang menimbulkan kerusakan dan perlengketan tuba, sehingga meningkatkan risiko kehamilan ektopik. Selain itu, kadar β -hCG rendah tanpa visualisasi kantong gestasi intrauterin pada ultrasonografi merupakan indikator penting ke arah kehamilan abnormal. Penegakan diagnosis definitif melalui eksplorasi bedah tetap menjadi standar pada kasus dengan kecurigaan ruptur.

Kesimpulan: Kehamilan ektopik harus selalu dipertimbangkan pada wanita usia reproduktif dengan massa adneksa, terlepas dari adanya diagnosis ginekologi lain. Evaluasi awal yang komprehensif sangat penting untuk mencegah keterlambatan diagnosis dan komplikasi.

Kata kunci: kehamilan ektopik, LGSIL, massa adneksa, keterlambatan diagnosis, laporan kasus

Integration of Cervical Cancer Screening and Nutrition Counseling Based on Local Foods to Address the Double Burden in Reproductive Health Services: A Case-Control Study at Arifin Achmad Hospital

Cantika Anakita¹, Noviardi², Wiwit Ade Fidiawati³, Donel S², Risti Sifa' Fadhillah⁴, Nur Khairani Putri¹

¹Resident Departement of Obstetrics and Gynecology, Faculty of Medicine of Riau University, Pekanbaru, Indonesia

²Departement of Obstetrics and Gynecology, Faculty of Medicine of Riau University, Pekanbaru, Indonesia

³Department of Pathology Anatomy, Faculty of Medicine, of Riau University, Pekanbaru, Indonesia

⁴Departement of Biomedical Science, Faculty of Medicine and Nutrition, IPB University, Bogor, Indonesia

ABSTRACT

Introduction: In settings facing the double burden of malnutrition where micronutrient deficiencies coexist with excess intake of unhealthy fats and rising diet-related non-communicable diseases integrating cervical cancer screening with nutrition counselling based on locally available foods is increasingly relevant. However, local evidence linking nutrient intake profiles to early-stage cervical cancer (stage I–II) remains limited, underscoring the need to identify nutrition related risk patterns to strengthen promotive and preventive strategies within reproductive health services.

Method: A retrospective case-control study was conducted at Arifin Achmad Hospital, from July 2025 to January 2026. Cases were women diagnosed with stage I–II cervical cancer, while controls were gynecology patients without cervical cancer lesions, recruited using consecutive sampling. A total of 110 participants were included (55 cases; 55 controls). Nutrient intake was assessed using a SQ-FFQ, and clinical characteristics were obtained from medical records. Multivariate logistic regression was used to describe nutrient components associated with early-stage cervical cancer and to inform feasible counselling messages deliverable alongside screening.

Result: Multivariate analysis showed distinct nutrition related associations with early-stage cervical cancer. Higher SFA intake emerged as a risk factor (OR 1.963), reflecting a dietary pattern potentially linked to proinflammatory and metabolic stress profiles. In contrast, several nutrient components showed protective associations (OR < 1), including total protein, sodium, niacin, vitamins A and E, magnesium, zinc, MUFA, PUFA, and probiotics, suggesting that macro and micronutrient adequacy and microbiota supporting intake may relate to lower susceptibility.

Conclusion: Higher SFA intake was associated with increased odds of stage I–II cervical cancer, while multiple nutrients and probiotics were inversely associated with the disease. These patterns support strengthening reproductive health services by integrating cervical cancer screening with nutrition screening and counselling that emphasizes balanced diets and locally available nutrient-dense foods to address the double burden context.

Keywords: Cervical cancer; Nutrition; Case-control.

Mind–Body Exercise (Yoga, Pilates) during Pregnancy and Postpartum Depression: A Systematic Review

Dawa Fauz Susanto^{1,2}, Yudianto Budi Saroyo¹, Arya Ivan Mahendra^{1,3}, Slamet Susanto⁴, Delvanny Alfikri Rekaputri Wicaksono^{3,5}, Gizar Baidlawi Susanto⁵

¹Department of Obstetrics and Gynecology, National Central General Hospital Cipto Mangun Kusumo, Faculty of Medicine, Universitas Indonesia, Jakarta, Indonesia

²Faculty of Medicine, National Development University “Veteran” Jakarta, Jakarta, Indonesia

³Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

⁴Gizar Mother and Child Hospital, Cikarang, Indonesia

⁵Department of Obstetrics and Gynecology, General Hospital dr. Soetomo, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

⁶Faculty of Medicine, Syarif Hidayatullah State Islamic University, Jakarta, Indonesia

ABSTRACT

Background: Postpartum depression (PPD) is a prevalent condition affecting maternal and infant health. Non-pharmacological approaches such as mind–body exercise are increasingly explored due to safety concerns of pharmacotherapy during pregnancy and lactation.

Objective: To evaluate the effectiveness of mind–body exercise (yoga and pilates) interventions in reducing depressive symptoms during pregnancy and the postpartum period.

Methods: A systematic review of interventional studies was conducted using electronic databases including PubMed, Scopus, Web of Science, and ScienceDirect. Eligible studies comprised randomized controlled trials and comparative studies assessing mind–body exercise in perinatal populations. Outcomes included validated depression scales.

Results: From an initial search of 2,645 records, three studies met the inclusion criteria. A 16-week contactless Pilates-based intervention significantly reduced depressive symptoms (EPDS, $p < 0.001$), stress ($p < 0.001$), and disability ($p < 0.001$), with additional improvements in metabolic and hormonal markers, including triglycerides ($p = 0.017$), insulin ($p = 0.032$), and cortisol ($p < 0.001$). An 8-week yoga program in postpartum women demonstrated significant reductions in depression ($t = 74.789$, $p < 0.001$), tension ($t = 24.608$, $p < 0.001$), and anger ($t = 44.10$, $p < 0.001$), with large effect sizes. Similarly, laughter yoga significantly reduced postpartum depression scores compared to control (EPDS: $t(102) = -14.007$, $p < 0.001$), while no significant changes were observed in controls.

Conclusion: Mind–body exercise interventions, including yoga and Pilates, significantly reduce depressive symptoms during the perinatal period. These approaches may offer safe, accessible alternatives or adjuncts to conventional treatments, with both psychological and physiological benefits. Further large-scale trials are needed to confirm long-term effectiveness.

Keywords: depressive symptoms; postpartum period; pregnancy; exercise intervention; perinatal health; psychological outcomes.

Dilema Etis dan Klinis pada Grandemultiparitas, Infeksi Sifilis yang Tidak Diobati, dan Penolakan Sterilisasi

Thomas Yohan Junardi, Joice M. M Sondakh, Hermie M.M Tendean, Anastasia M. Lumentut, Rudy A. Lengkong, Linda M. Mamengko
Bagian / KSM Obstetri Ginekologi
Fakultas Kedokteran Universitas Sam Ratulangi RSUP Prof. Dr. R.D. Kandou Manado
Korespondensi: thomasyohanj@gmail.com, +6281287899699

ABSTRAK

Latar Belakang: Grandemultiparitas merupakan masalah klinis juga cermin adanya ketimpangan determinan sosial kesehatan. Kegagalan skrining antenatal, adanya infeksi sifilis, serta rendahnya pemanfaatan kontrasepsi turut berkontribusi terhadap kehamilan berisiko tinggi dan luaran perinatal yang buruk. Kasus ini menggambarkan interaksi kompleks antara faktor medis, sosial, dan sistem pelayanan kesehatan sekaligus menyoroti dilema dalam menghormati otonomi reproduksi pasien di tengah indikasi medis yang kuat.

Kasus: G8P7A0 29 tahun dengan gawat janin. Pasien dengan riwayat terdiagnosis sifilis sejak kehamilan anak ke-tujuh, yang berakhir dengan kematian neonatal diduga terkait sifilis kongenital. Hingga kehamilan ini pasien belum mendapatkan pengobatan. Pasien teridentifikasi memiliki faktor risiko sosial berupa multipel partner tidak menikah. Intervensi kontrasepsi IUD dilakukan pasca SC cito atas penolakan dilakukan sterilisasi.

Pembahasan: Kasus ini menampilkan tantangan klinis dalam menyeimbangkan indikasi medis dengan otonomi pasien. Langkah kompromi dengan penggunaan IUD merupakan keputusan berbasis bukti yang efektif (harm reduction) di tengah tingginya potensi loss to follow-up pascasalin. Intervensi obstetri perlu diintegrasikan dengan edukasi, dukungan psikososial, dan modifikasi perilaku.

Kesimpulan: Skrining antenatal, tatalaksana kasus, dan edukasi komprehensif mengenai kontrasepsi pada wanita hamil penting untuk menurunkan morbiditas dan mortalitas ibu– janin juga mencegah angka kehamilan, persalinan, dan infeksi menular seksual.

Kata Kunci: Grandemultipara, Sifilis, IMS, Kontrasepsi

Karakteristik Sistem Rujukan Kasus Obstetri di Rumah Sakit Jejaring Pendidikan di Kota Makassar Tahun 2024-2025

Nur Azizah, Eddy Hartono, Elizabet C. Jusuf

Departemen Obstetri dan Ginekologi, Fakultas Kedokteran, Universitas Hasanuddin, Makassar –
Indonesia

ABSTRAK

Latar belakang: Sistem rujukan obstetri yang tepat, baik rujukan dini berencana (RDB) maupun rujukan tepat waktu (RTW), berperan penting dalam meningkatkan kualitas pelayanan serta luaran ibu dan bayi. Namun, pola rujukan masih dipengaruhi oleh berbagai faktor klinis dan sistem kesehatan. Oleh karena itu, pemahaman terhadap karakteristik rujukan obstetri diperlukan untuk mendukung ketepatan pengambilan keputusan dan optimalisasi pelayanan.

Tujuan: Mengetahui karakteristik sistem rujukan pada kasus obstetri di Rumah Sakit Jejaring Pendidikan di Makassar pada periode tahun 2024-2025.

Metode: Penelitian ini merupakan penelitian kuantitatif analitik dengan pendekatan retrospektif. Data 3.072 kasus obstetri dari rekam medis Rumah Sakit Jejaring Pendidikan di Makassar pada periode Januari 2024-Desember 2025 yang memenuhi kriteria inklusi telah terkumpul. Kriteria rujukan, asal rujukan, alasan rujukan, usia pasien, paritas, cara pembayaran, kegawatdaruratan, status risiko kehamilan dan luaran ibu dicatat. Analisis data dilakukan dengan uji chi-square dengan bantuan program SPSS 27.

Hasil: Sebagian besar pasien merupakan rujukan dini berencana (RDB) sebanyak 75,13%, yang dirujuk dari dokter spesialis sebanyak 34,47%, untuk penanganan lanjut sebanyak 46,38%. Sebagian besar pasien berusia 20-35 tahun sebanyak 69,37% dan multipara sebanyak 39,06%. Hampir seluruh pasien melakukan pembayaran dengan BPJS (98,31%). Sebagian besar pasien mempunyai kegawatdaruratan APGO (Ada potensi gawat obstetri) sebanyak 63,51% dan KRR (Kehamilan Risiko Rendah) sebanyak 45,67%. Karakteristik pasien dengan persentase RTW (Rujukan Tepat Waktu) secara signifikan lebih tinggi daripada RDB (Rujukan Dini Berencana) terdapat pada rujukan dari Rumah Sakit Kota/Kab, untuk perawatan ICU/NICU, usia < 20 tahun atau > 35 tahun, perempuan yang pernah melahirkan (para), AGDO (Ada Gawat Darurat Obstetri) dan risiko kehamilan KRT (Kehamilan Risiko Tinggi) dan KRST (Kehamilan Risiko Sangat Tinggi) (nilai $p < 0,05$).

Kesimpulan: Mayoritas rujukan obstetri merupakan rujukan dini berencana (RDB) pada pasien dengan risiko rendah hingga sedang, sedangkan rujukan tepat waktu (RTW) lebih banyak terjadi pada pasien dengan kondisi kegawatdaruratan dan risiko tinggi hingga sangat tinggi. Terdapat perbedaan bermakna antara karakteristik pasien dengan jenis rujukan, di mana RTW berhubungan dengan kondisi klinis yang lebih berat serta luaran yang lebih buruk. Oleh karena itu, deteksi dini risiko kehamilan dan kegawatdaruratan melalui pelayanan antenatal yang optimal sangat penting untuk memastikan rujukan yang tepat dan meningkatkan luaran ibu dan bayi.

Kata kunci: ibu hamil, karakteristik, obstetri, rujukan

Psychosocial Impact of Recurrent Pregnancy Loss in a G7P0A6 Patient with Hyperthyroidism: A Case Report

Sisca Yulistiana¹, Hartati², R. Ismail Hadyatma³, Kemala Andini Prizara⁴

¹Obstetric and Gynecology Resident, Faculty of Medicine, Sriwijaya University, Indonesia

²Obstetric and Gynecology Departement, Faculty of Medicine, Sriwijaya University, Indonesia

ABSTRACT

Background: Recurrent pregnancy loss (RPL) presents significant physical and psychosocial challenges, particularly when complicated by comorbidities such as Graves' disease and polycystic ovary syndrome (PCOS). This case highlights the complex interplay between medical management and the psychological burden of repeated reproductive trauma.

Case: A 37-year-old woman, gravida 7 para 0 abortus 6 (G7P0A6), at 21 weeks' gestation presented with euthyroid-phase Graves' disease and PCOS. Having no living children, she expressed extreme psychosocial distress and a desire for permanent sterilization (tubectomy) if the current pregnancy failed. Clinical evaluation showed a viable intrauterine fetus with stable maternal endocrine status.

Discussion: Repeated miscarriages provoke profound anxiety, guilt, and depressive symptoms, often leading to impulsive decisions regarding future fertility. Managing such cases requires a multidisciplinary approach integrating obstetrics, internal medicine, and psychiatry. Deferring irreversible decisions like tubectomy is crucial during periods of acute emotional vulnerability, especially in nulliparous patients.

Conclusion: Comprehensive medical and psychological monitoring is essential for high-risk pregnancies with a history of recurrent loss. Antenatal psychological support and ethical counseling are vital to optimize maternal well-being and ensure well-informed reproductive choices.

Keywords: Recurrent Pregnancy Loss, Graves' Disease, Psychosocial Impact, High-Risk Pregnancy

Bisphenol-A Exposure and Precocious Puberty: Evidence, Biological Mechanisms, and Relevance to Adolescent Reproductive Health in Indonesia

Ratna Dewi Puspita Sari^{1*}, Josef Maria Seno Adjie¹, Dea Putri Andeska²

¹Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Indonesia, Depok, Indonesia

²Department of Biology, Faculty of Biology, Universitas Gadjah Mada, Sleman, Indonesia

*Corresponding author: ratna.dewi44@ui.ac.id

ABSTRACT

Background: Exposure to endocrine-disrupting chemicals (EDCs) has gained increasing attention as a potential environmental factor affecting adolescent reproductive health. Bisphenol-A (BPA), widely used in polycarbonate plastics and food packaging materials, exhibits estrogenic activity that may disrupt regulation of the hypothalamic–pituitary–gonadal (HPG) axis. Increasing reports of early pubertal onset over the past decade have raised concerns regarding the potential role of BPA in altered pubertal timing.

Objective: This review aims to examine recent scientific evidence (2016–2026) on the association between BPA exposure and precocious puberty, explore the underlying biological mechanisms, and discuss the relevance of these findings to adolescent reproductive health in Indonesia.

Methods: A rapid narrative review was conducted using original research articles identified through the Scopus database. Human and animal studies evaluating BPA exposure and pubertal onset outcomes were included and narratively synthesized.

Results: Human epidemiological evidence remains heterogeneous and inconsistent, potentially due to variations in study design, exposure assessment methods, and timing of exposure measurement. In contrast, experimental animal studies more consistently demonstrate accelerated pubertal onset following BPA exposure during critical developmental periods. The most frequently reported biological mechanism involves activation of the kisspeptin–gonadotropin-releasing hormone (GnRH) pathway, along with hormonal dysregulation and altered reproductive development.

Conclusion: Current evidence suggests biological plausibility that BPA may contribute to altered pubertal timing, although causal relationships in humans remain uncertain and require further investigation. These findings highlight the importance of greater attention to environmental chemical exposures in discussions of adolescent reproductive health in Indonesia.

Keyword: Bisphenol-A; endocrine disrupting chemicals; environmental health; adolescent reproductive health; precocious puberty

Effect of Ramadan Fasting during Pregnancy on Fetal Growth Outcomes: A Systematic Review

Gizar Baidlawi Susanto¹, Yudianto Budi Saroyo², Slamet Susanto³, Dawa Fauz Susanto⁴

¹Faculty of Medicine, Syarif Hidayatullah State Islamic University, Jakarta, Indonesia

²Department of Obstetrics and Gynecology, National Central General Hospital Cipto Mangun Kusumo, Faculty of Medicine, Universitas Indonesia, Jakarta, Indonesia

³Gizar Mother and Child Hospital, Cikarang, Indonesia

⁴Faculty of Medicine, National Development University "Veteran" Jakarta, Jakarta, Indonesia

ABSTRACT

Background: Ramadan fasting during pregnancy is a common practice among Muslim women despite medical exemptions. Concerns have been raised regarding its potential impact on fetal growth. Conventional indicators such as birth weight and small for gestational age (SGA) are frequently used to assess fetal growth, yet evidence remains inconsistent across studies.

Methods: A systematic search of PubMed, Scopus, and ScienceDirect was conducted to identify English-language studies evaluating the effect of Ramadan fasting during pregnancy on fetal growth outcomes. Observational studies assessing outcomes such as birth weight, low birth weight (LBW), or SGA were included. Studies focusing on non-pregnant populations, non-fasting exposure, reviews, and conference abstracts without full text were excluded. Data on study design, population characteristics, exposure type, and fetal growth outcomes were extracted and synthesized descriptively.

Results and Discussion: A total of 107 records were identified, of which 5 studies met the inclusion criteria after screening and full-text assessment. Most studies demonstrated no significant association between Ramadan fasting and adverse fetal growth outcomes. Birth weight differences between fasting and non-fasting groups were generally small and not statistically significant. Similarly, the incidence of LBW and SGA showed no consistent increase among fasting mothers. Some studies reported minor reductions in maternal nutritional intake; however, these changes did not translate into clinically significant fetal growth restriction. Variations in study design, timing of fasting exposure, and maternal characteristics may explain heterogeneity across findings.

Conclusion: Current evidence suggests that Ramadan fasting during pregnancy does not significantly affect fetal growth outcomes, including birth weight and SGA. However, variability in study methodologies and limited high-quality data warrant further well-designed prospective studies.

Keywords: Ramadan fasting, pregnancy, fetal growth, birth weight, SGA

Maternal and Women's Health in Social and Cultural Perspective: A Socio-Cultural Case from Central Java, Indonesia

Eva Rifqi Nofitri

Cilacap Pertamina Hospital, Cilacap, Central Java

ABSTRACT

Background: Maternal health in Central Java is a complex phenomenon shaped not only by clinical access but also by deep-seated socio-cultural determinants. Despite the widespread availability of formal healthcare facilities like Puskesmas, significant health challenges such as chronic anemia and delayed emergency referrals persist. These issues are often driven by a misalignment between modern medical protocols and local traditional beliefs. Furthermore, rigid gender norms and limited female autonomy in decision-making often create invisible barriers, preventing women from accessing life-saving interventions during pregnancy and childbirth. Understanding these cultural layers is essential to improving maternal survival rates in the region.

Methods: This study utilizes a qualitative approach combined with a systematic literature review of maternal health practices specifically in rural Central Java. Data were analyzed using the World Health Organization (WHO) Social Determinants of Health framework. This methodology allows for a comprehensive mapping of the intersection between local traditions, socio-economic status, and health-seeking behaviors, ensuring that the findings reflect the lived experiences of Javanese women.

Discussion:

1. Cultural Beliefs and Nutrition: Traditional dietary restrictions, known locally as pantangan, remain prevalent during pregnancy. Many expectant mothers avoid essential nutrients due to myths, which directly contributes to the high prevalence of anemia (Permatasari et al., 2022).
2. Decision-Making Structures: In the Javanese kinship system, reproductive choices are rarely individual. They are often collective family decisions involving husbands and elders (parents or in-laws), which can sometimes prioritize tradition over urgent medical advice (Sari et al., 2024).
3. Autonomy and Utilization: Evidence shows a strong positive correlation between a woman's level of autonomy—her power to manage finances and mobility—and her consistent utilization of professional maternal health services (Handayani & Cahyati, 2023).
4. Community Integration: Successful health outcomes depend on bridging the gap between modern medicine and local wisdom. This includes involving community leaders and traditional birth attendants in the formal referral chain (Sulistiyorini et al., 2021).

Conclusion: Improving maternal health in Central Java requires a transformative, culturally sensitive approach. Interventions must evolve beyond clinical care to actively empower women's autonomy and engage the broader social ecosystem, including husbands and elders. By transforming restrictive cultural norms into supportive health practices and integrating local leaders into the health system, we can create a safer environment for mothers. This socio-cultural shift is the key to ensuring that no woman is left behind due to the barriers of tradition.

Keywords: Maternal health, socio-cultural, Central Java, women's autonomy, anemia.

Hubungan Pre-Pregnancy Body Mass Index dan Gestational Weight Gain dengan Luaran Maternal dan Neonatal : Systematic Review

Satria Putra Pamungkas¹, Muhammad Nurfauzi Ramadhan²

¹Fakultas Kedokteran, Kesehatan Masyarakat dan Keperawatan, Universitas Gadjah Mada

ABSTRAK

Latar belakang: Obesitas pra-kehamilan dan kenaikan berat badan gestasional yang tidak adekuat merupakan faktor risiko yang dapat dimodifikasi dan berhubungan dengan komplikasi maternal maupun neonatal. Faktor ini berpotensi berkontribusi terhadap peningkatan kejadian gestational diabetes mellitus, preeklampsia, seksio sesarea, makrosomia, low birth weight, dan perawatan intensif neonatal. Systematic review ini dilakukan untuk menilai hubungan pre-pregnancy body mass index (BMI) dan gestational weight gain (GWG) dengan luaran maternal dan neonatal.

Metode: Pencarian literatur dilakukan pada artikel observasional yang menilai hubungan pre-pregnancy BMI dan/atau GWG dengan luaran kehamilan pada kehamilan singleton. Enam studi yang relevan diidentifikasi dan diekstraksi datanya, kemudian disintesis secara naratif berdasarkan paparan utama, karakteristik subjek, dan luaran maternal- neonatal yang dinilai.

Hasil Diskusi: Enam studi menunjukkan pola yang konsisten bahwa pre-pregnancy BMI tinggi dan GWG berlebihan berhubungan dengan luaran yang lebih buruk. Obesitas pra-kehamilan dan excessive GWG berasosiasi dengan peningkatan risiko gestational diabetes mellitus, preeklampsia, seksio sesarea, dan makrosomia. Sebaliknya, inadequate GWG berhubungan dengan peningkatan risiko low birth weight. Beberapa studi juga menunjukkan bahwa obesitas maternal berkaitan dengan luaran neonatal yang lebih buruk, termasuk kebutuhan perawatan intensif neonatal. Temuan ini menegaskan bahwa status antropometri sebelum dan selama kehamilan merupakan determinan penting dalam kualitas pelayanan obstetri dan ginekologi preventif.

Kesimpulan: Pre-pregnancy BMI dan gestational weight gain merupakan faktor risiko penting dan dapat dimodifikasi yang berhubungan dengan luaran maternal dan neonatal yang merugikan. Konseling pra-konsepsi, pemantauan kenaikan berat badan selama kehamilan, dan intervensi gaya hidup sejak layanan primer perlu diperkuat untuk membantu menurunkan komplikasi obstetri dan luaran neonatal buruk.

Kata Kunci: Pre-Pregnancy BMI; Gestational Weight Gain; Maternal outcomes; Neonatal Outcomes; Systematic Review

A Holistic Approach to Unplanned Unmarried Teenage Pregnancy Complicated by Undernutrition and Psychosocial Vulnerability: A Case Report

Bonifasius¹, Sri Pudjiastuti², Mohamad Rezha Faisal²

¹Department of Obstetrics and Gynecology, Faculty of Medicine Universitas Indonesia, Jakarta, Indonesia

²Department of Obstetrics and Gynecology, Persahabatan Hospital, Jakarta, Indonesia

ABSTRACT

Background: Teenage pregnancy remains a significant global public health issue, particularly among vulnerable populations, where it is closely associated with biological immaturity, poor nutritional status, and psychosocial disadvantage. These factors contribute to increased risks of adverse maternal and neonatal outcomes, including low birth weight, prematurity, and infection. Furthermore, teenage pregnancy is strongly linked to mental health challenges, social stigma, and limited access to healthcare and education, necessitating a comprehensive and holistic approach to care.

Case: A 14-year-old primigravida at 38 weeks of gestation with an unplanned, unmarried pregnancy presented in labor with undernutrition (BMI 16.8 kg/m²). Ultrasound revealed a singleton live fetus consistent with small-for-gestational-age. The patient was managed using a multidisciplinary approach, including maternal–fetal monitoring, comprehensive counseling, infection surveillance, prophylactic antibiotics, nutritional supplementation, and psychosocial support.

Discussion: Teenage pregnancy, especially in very young age, is associated with increased risks of obstetric complications due to incomplete physical and reproductive maturation, as well as inadequate antenatal care. Psychosocial vulnerability, including unplanned pregnancy, lack of partner support, and educational disruption, is a critical determinant of maternal and neonatal outcomes. Evidence shows that teenage mothers are at higher risk of depression, anxiety, and poor long-term socioeconomic outcomes. A holistic approach is therefore essential, integrating medical care, nutritional intervention, and psychosocial support. Multidisciplinary management involving healthcare providers, family, and social services has been shown to improve both maternal well-being and neonatal outcomes by addressing the complex interplay of biological, psychological, and social factors.

Conclusion: A holistic approach that integrates obstetric care and psychosocial intervention is essential to optimize outcomes and address the broader determinants of health in vulnerable populations.

Keywords: Holistic care, Multidisciplinary management, Psychosocial vulnerability, Teenage pregnancy