[IC-1]
Pregnant Women with Supraventricular Tachycardia in District Hospital

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ABSTRACT

Supraventricular Tachycardia (SVT) rarely happens during pregnancy. The increasing of the hemodynamic, hormonal, autonomic, and emotional changes causes the increasing of hyperdinamic circulation and sensitivity of adregenic receptors. In this case, there was a 26 years-old pregnant woman, G1P0A0, at 16 weeks pregnant. She had a palpitation before and ever came into emergency room, the symptoms were chest pain over one day, palpitation, and dyspnea. The heart rate was 168 bpm and blood pressure was 80/60 mmHg which is signed of shock. The Electrocardiogram (ECG) showed SVT. Syncronized cardioversion was given and the ECG became into sinus rythm without preexcitation on resting ECG. The reguler heart rate was 108 bpm and the hemodynamic became stable. Then, the patient was evaluated in monitoring room and treated with selective β-blocker. Immediate electrical cardioversion is recommended for SVT with haemodynamic instability. Cardioversion is safe for pregnancy because there are minimum risks for fetus in all stages of pregnancy. Vagal manouveres, adenosine, and selective β-blocker iv are recomended for acute management of SVT with stable hemodynamic, but not all hospital have it. For long treatment, a low dose of selective β-blockers can be effective treatment for SVT without preexcitation on resting ECG in pregnancy. Digoxin or verapamil can be another choice of therapy. However, catheter ablation therapy with radiofrequency should be considered for recurrent symptomatic episodes resistant to drug therapy.

Keywords: Supraventricular tachycardia; Supraventricular tachycardia in pregnancy; cardioversion

[IC-2]
PANCARDITIS DURING PREGNANCY IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENT. HOW TO MANAGE?: A CASE REPORT

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ABSTRACT

Introduction: Pancarditis is a serious and fatal cardiology complication in patient with Systemic Lupus Erythematosus (SLE). Lupus pancarditis in pregnant women is a rare case in our daily practice. ESC guideline recommends colchicine to prevent the recurrence of pericarditis. Management of lupus pericarditis during pregnancy requires special attention by involving multidisciplinary approach to decrease maternal mortality and morbidity.
Case Presentation: A 28 y.o 28th weeks pregnant woman with a chief complain shortness of breath in emergency room. She had been diagnosed with SLE and pericarditis before. On examination, the blood pressure was 112/80 mmHg, HR 114 bpm and RR 28x/minutes, SpO2 98 %. There were crackels on both lungs and pitting edema on both legs. ECG showed sinus tachycardia with low voltage. There was water bottle sign from chest X-ray. Transthorachic echocardiography showed moderate pericardial effusion without signs of tamponade, dilatation of all cardiac chambers, anterior hypokinetic and decreasing EF (52%). This result worse than the previous one. On treatment of diuretic and corticosteroid, the obstetricians decide to terminate the pregnancy because of worsening pancarditis due to SLE and pregnancy. She received colchicine 0.5 mg/ day during hospitalization.
Discussion: ESC guideline recommends NSAID as a first line theraphy for pericarditis but can not be used in the third semester because of the possible effects on renal function and ductus arteriosus. Moreover, colchicine was recommended to prevent the recurrence of pericarditis. In the other hand, colchicine is considered contraindicated during pregnancy. Recurrent pericarditis in pregnant women possibly caused by the abcence of colchicine as their therapy. Furthermore, when pregnancy getting older, patient's condition with lupus pericarditis became worsen. Pregnancy termination can be considered to decrease maternal mortality.
Conclusion: Management of lupus pancarditis during pregnancy is challenging because of medical limitation during pregnancy so multidisiplinary approach was needed.

Keywords: pancarditis; pregnancy; lupus

[IC-3]
Case Report : Asymptomatic New Onset Left Bundle Branch Block Induced by Exercise Test

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ABSTRACT

New onset left bundle branch block (LBBB) induced by treadmill test is not commonly found. The development of LBBB during treadmill test will predict a higher risk of mortality and increase coronary syndrome incidence three times higher. We present a case of exercise-induced LBBB without any symptom. A 52 Year Old Male with history of hypertensive heart disease undergone treadmill test because of atypical chest pain and dyspnea aggregated by physical stress which relieved by resting. Body mass index was 30 kg/m^2, blood pressure was 130/90 mmHg and rest heart rate was 71 bpm. The rest physical examination was normal. Resting electrocardiogram (ECG) depicted sinus rhythm with normo-axis, poor r wave progression and early repolarization. The ECG developed LBBB at the frequency of 95 bpm (72% of the maximum heart rate in patient with beta blocker therapy) without chest complain in stage I of exercise after 2.50 minute. The test entered recovery stage after 10.21 minute because of fatigue. Patient delivered to monitoring room because ECG was still remained LBBB during recovery until the end of recovery period at 80 bpm heart rate without any symptom. Aspirin, beta blocker, ace-inhibitor/arb, statin was administrated. ECG was still in the form of LBBB, the LBBB changes to be a sinus rhythm after 4 hours of evaluation at 71 bpm heart rate. The coronary disease incidence will increase when the LBBB developed at the heart rate less than 125 bpm during exercise test, and it called as positive ischemic exercise test response.

Keywords: Left bundle branch block; Electrocardiogram; Exercise testing

[IC-4]
A Case Report: Transient St-Elevation With Atrial Fibrillation Following Honey-Bee Sting, Kounis Syndrome

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ABSTRACT

Allergic angina syndrome, also known as Kounis syndrome is defined as the co-incidental occurrence of an acute coronary syndrome with hypersensitivity reactions following an allergenic event. Kounis syndrome is triggered by many factors, such as medications, foods, insect stings, exposure to radiographic contrast media, coronary stent, etc. It has three different variants: type I without coronary disease, type II with coronary disease, and type III drug-eluting coronary stent thrombosis. A 50-year-old male was brought to our emergency room with an altered mental status. He complained a short period of chest discomfort, nausea, excessive sweating, and suddenly collapse after he had been stung by a honey bee about 30 minutes before arriving at the emergency room. There was no history of hypertension, diabetes, and angina but he used to be a smoker. Patient showed signs of shock without other abnormalities in physical examination. Early ECG findings were atrial fibrillation with normal ventricular response; ST-elevation in lead II, III, aVF; and ST depression in lead I, aVL, V1-V4. Thrombolytic therapy was planned initially considering AMI because the nearest PCI-capable hospital was more than 120 minutes. From re-assessment prior to thrombolytic therapy, we found a sinus rhythm with complete resolution of ST-elevation in inferior leads and there was clinical improvement of the patient, so the thrombolysis was cancelled. In laboratory test results, the troponin-T level was elevated. Then the patient was admitted and managed as NSTE-ACS with transient ST-elevation while given an anti-allergic agent.

Keywords: Kounis syndrome; allergic angina syndrome; transient ST-elevation; NSTE-ACS; honey bee sting

[IC-5]
A Closer Look into Daily Lifestyle of People Living in Bhintuka, Mimika, Papua where Emerging Hypertension Awaits Coronary Heart Disease

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ABSTRACT

Hypertension has strong pathophysiologic correlations with coronary heart disease. It triggers endothelial dysfunction, exacerbates atherosclerosis, and contributes in making the atherosclerotic plaque more unstable. Few studies show that there is an uprise of coronary heart disease among people living in Papua. In Bhintuka itself, a part of Mimika, Papua, the number of hypertension cases is higher than ever, and more in female. The purpose of this qualitative research is to know whether local people's daily activities explained the phenomenon. Five people (female=3, male=2) living in Bhintuka were interviewed, each from different groups of population aged 20-50 years old. Subjects were chosen based on the basic demographic data with the highest number of hypertension cases from the official monthly report from Puskesmas Bhintuka from January-July 2018. Daily food and activities recall were obtained during the interview, including habits of smoking, alcohol consumption, and regular exercises. The female farmers juggle between doing chores, gardening, swine farming, and selling their crops. The housewife cares for her household while managing her kiosk. The unemployed male does sightseeing light walk in the morning around the neighborhood. All were not smoking nor drinking alcohol nor exercising, each day having 2 cups of coffee and only 2 mealtimes of rice, alone or with vegetables and fried snacks if available. Only the male working at a private company could afford protein sources 3x/week. The poor diet combined with absence of regular exercises amid moderate daily physical activities is critical in developing hypertension. Stressful living situations in female group compared to male group might explain why more cases occur in female in this area. This mandates an integrated program to promote well-balanced diet, regular exercises and stress management in primary health care facilities to prevent further increase in hypertension.

Keywords: coronary heart disease; hypertension; risk factors; health promotion; primary health care program; qualitative research

[PP-45]
Deal With Atrial Fibrillation: When It Getting Worse and Electrical Cardioversion Is Not The Option, Which Anti Arrhythmic Drug Should We Choose?

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ABSTRACT

Background: Atrial fibrillation (AF) is the most common arrhythmia. AF with rapid ventricular response (RVR) which followed by hemodynamic instability is a life-threatening condition. In this condition, electrical cardioversion is needed immediately. But, sometimes electrical cardioversion cannot be performed due to the absence of a device or the patient refuses to do electrical cardioversion. Therefore, pharmacological cardioversion should be done, and antiarrhythmic drug selection must be done carefully.
Case Description: A 48-year-old woman referred to Emergency Department of Ramelan Naval Hospital with chief complaint of palpitation followed by chest pain, shortness of breath, and transient episode of syncope. In the previous hospital, patient was diagnosed as AF with RVR followed by hemodynamic instability. She was treated 150 mg amiodarone intravenous twice, followed by 300 mg in 6 hours. The drug failed to control AF.
She came to our Emergency Department. She was fully conscious with blood pressure 98/60 mmHg, heart rate 164 bpm, pulse rate 78 bpm, and chest X-ray showed cardiomegaly, cardiothoracic ratio was 75%. Routine blood test, renal function test, and serum electrolyte were within normal limit. After expert consultation, intravenous digoxin was given slowly within ten minutes. After one-hour heart rate became slower, between 98 until 114 bpm. The rhythm was still AF but intravenous digoxin successfully controlling the heart rate and relieved the complaint.
Conclusion: Drug selection in pharmacological cardioversion is determined by one important consideration, whether we will restore the rhythm or control ventricular rate only. This consideration depends on how long the AF has persist, symptom severity, age of the patient, existence of underlying heart disease, and other comorbidities, which may limit therapeutic options.

Keywords: atrial fibrillation; antiarrhythmic drug; pharmacological cardioversion; amiodarone; digoxin

[PP-46]
Bezold Jarisch Reflex Following Thrombolytic Therapy: When It Dramatically Come, What Should We Do?

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ABSTRACT

Background: Bezold-Jarisch Reflex (BJR) can occur after coronary reperfusion. An increase in parasympathetic tone is the predominate feature from activation of chemoreceptors primarily in the left ventricle. It can at times be dramatic causing significant bradycardia and hypotension.
Case Description: A 62 year old man came to Emergency Department, with chief complaint of fell when he was walking in his house, 2 hours before admission, which preceded by syncope and sweating. Either chest pain or abdominal discomfort were denied. History of hypertension and diabetes were denied. Cigarette abuse is the only risk factor that he has. Physical examination in ED, he is fully consciousness with blood pressure (BP) 126/55 mmHg, heart rate (HR) 53 bpm, and respiratory rate (RR) 24 bpm. His ECG showed ST elevation inferiorly and laboratory exams revealed leucocytes 20.560, blood glucose 280 mg/dL, and negative Troponin I. We decided to give him thrombolytic therapy for reperfusion strategy.
Streptokinase infusion was given immediately after diagnosed was establish. Approximately ten minutes after thrombolytic was started, patient was vomited and his BP falling dramatically to 67/48 mmHg with HR 38 bpm and RR 8 bpm. Immediately, we reduced the rate of streptokinase. Fluid resuscitation and Sulfas Atropine 0.5 mg were given, followed with dopamine pump 5mcg. His BP raised slowly and reached 119/62 with HR 133 bpm and RR 28 bpm within twenty minutes. Dopamine pump was stop, and streptokinase infusion was continued. After streptokinase is fully given, repeated ECG showed that ST elevation was decreased.
Conclusion: Successful reperfusion can stimulate BJR. BJR in inferior myocardial infarction represents a reliable prognosticator of timely reperfusion and sustained coronary patency of the acutely ischemic myocardium. Routine use of vasoconstrictor and sympathomimetic drug in BJR is abandoned because of in almost case, they are always transient and soon ends.

Keywords: thrombolytic therapy; streptokinase; coronary reperfusion; Bezold-Jarisch Reflex; myocardial infarction

[PP-47]
Cardiogenic Shock in Peripartum Cardiomyopathy: Hurry Up! Fix the Pump Failure

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ABSTRACT

Background: Peripartum cardiomyopathy (PPCM) is a rare, life-threatening condition affecting women in the last month of pregnancy until 5 months postpartum. It is associated with high mortality rates by the development of acute heart failure due to left ventricular dysfunction. More intriguing challenge happens when it rapidly evolves to cardiogenic shock. Prompt investigation and treatment are needed to save life.
Case Description: A 33-year-old woman came to Emergency Department Dr Ramelan Naval hospital with acute onset shortness of breath, sweating, dizziness and palpitation which getting worse since two days ago. She gave birth one month prior to the symptoms and never had those complains before. Vital signs showed her blood pressure was 70/40, pulse rate 124 bpm, RR 30 breaths per minute, while the oxygen saturation was 88%. Lung auscultation revealed bilateral rhonchi more than half of lung fields and cold peripheral extremities. Electrocardiogram showed sinus tachycardia with low QRS voltage in I, aVL, V1- V5 and thorax radiography showed cardiomegaly with prominent cephalization.
Intravenous dopamine and dobutamine was administered immediately to rise blood pressure and improve tissue perfusion. After the blood pressure rose and the extremities warmer, intravenous diuretic was given continuously to reduce pulmonary edema and fix up the hemodynamic. Laboratory examination showed hypokalemia and leukocytosis, treated with potassium chloride infusion and antibiotics. After 2 days, the symptoms gradually subsided. In the fifth day of admission the patient remained well with intravenous diuretic, oral potassium-sparing diuretic, potassium chloride, ACE inhibitor and beta blocker, and fully recovered after a week.
Conclusion: PPCM affects women seriously due to its sudden failure in heart function that could lead into maternal mortality. Early recognition with prompt diagnosis, followed by right treatment are needed in order to survive.

Keywords: peripartum cardiomyopathy; cardiogenic shock; heart failure

[PP-48]
Reinfarction in Patients with Carcinoma Recti Post Laparatomy

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ABSTRACT

Introduction: Atrial fibrillation (AF) is a common arrhythmia. Patients with persistent or permanent persistent AF must have a controlled heart rate before elective surgery. AF with a rapid ventricular response can cause cardiovascular complications.
Case : Mrs. R, 75 years, Patients with complaints of bloody defecation and difficulty defecating. The patient was treated with laparotomy surgery. Previously, patients diagnosed ca mamae in 2004 had been treated with surgery, radiation and hormonal treatment. Patients had a heart attack with Coronay Artery Disease (CAD) and Percutaneous Transluminal Coronary Angiplasly (PTCA) in 2007. History : diabetes mellitus, hypertension.
Preoperative cardiac examination, LV failure with AF rhythm was 75-80 x / minute, LAD, anterior lateral ischemia and Aortic Regurgitation. Echocardiography : Mitral Regurgitation, Ejection Fraction 31.5%.
On the first day after surgery the patient had hyperkalemia (K: 5.8 mmol / L) and metabolic acidosis (pH 7.199). On the second day the patient complained of dispneu, nausea and vomiting.
On the third day, there was a new onset of RBBB (AMI), Electrocardiogram: Atrial fibrillation, rhythm 80-150x/minute, complete RBBB, inferior OMI. Therapy given : cordaron, lasix, vascon and cedocard. Diagnosis is reinfarction, MR and CHF.
On the tenth day, the condition of the patient was repaired, blood pressure 108/55 mmHg, Hr 90x / min, AF rhythm, positive murmur, some medications are changed orally.
Discussion: Reinfarction in these patients arises because there are several risk factors as these patients have been known to have atrial fibrillation before, CAD, previous myocardial infarction and PTCA action, then this patient is accompanied by hypertension and diabetes mellitus.
Conclusion: Reinfarction can occur in patients with a history of CAD, AF, accompanied by hypertension and diabetes mellitus. But with strict supervision, monitoring and treatment, the patient recovered.

[PP-49]
MATERNAL COLLAPSE IN SPONTANEOUS POST PARTUM WOMAN WITH PRIMARY ARTERIAL HYPERTENSION : A DEATH CASE REPORT

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ABSTRACT

Introduction : Heart disease during pregnancy is increasingly happening globally. From the data on 2014 , there were 102 cases of heart occurring in Yogyakarta. Heart disease in pregnancy contributes to 10-15% of maternal deaths. Pulmonary hypertension is a very dangerous heart disease. Case studies of pregnant women with pulmonary hypertension are still limited.
Case Presentation : A woman, 25 years old, primigravida 31 weeks gestasional age, came due to complaints of tightness and chest pain for 5 days. Patients were diagnosed with pulmonary hypertension since 2016 (Echocardiography and RHC) and routinely consume phosphodiesterase inhibitors. Three weeks earlier the patient had been given steroid injections for fetal lung maturation. Patient looks dyspnea with tachycardia, desaturation and split in heart sounds. Ten hours of treatment in ICU, the patient entered into latent phase of labor. Expective management was decided with Intralabor anesthesia. The patient then gave birth spontaneously to a 1544 grams female baby with an apgar score of 8/9. There is no post partum bleeding. Twelve hours later, worsening occurs, the patient is restless and complains of pain followed by cardiac arrest. Resuscitation was done, but the patient is not helped. The patient was declared dead.
Discussion : Patients with pulmonary arterial hypertension are included in WHO class risk IV. Pregnancy is contraindicated because the risk of maternal death is very high. Immediate termination of pregnancy must be discussed with the patient. If the patient continues the pregnancy, assisted vaginal delivery and epidural labor anasthesia is recommended. Pain management, preventing valsalva maneuvers, invasive fluid monitoring, and preventing post partum hemorrhage are the key of management.
Conclusion : Pregnancy in patients with pulmonary arterial hypertension can result in maternal death. Cardiology, obstetrics and gynecology, anesthesia, and perinatology teamwork is needed during the peripartum period.

Keywords : Pulmonary artery hypertension; pregnancy; death

[PP-50]
Systemic Lupus Erythematosus associated Pulmonary Arterial Hypertension: Serial Case Report

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ABSTRACT

Background: Pulmonary arterial hypertension (PAH) is commonly associated with connective tissue disease including systemic lupus erythematosus (SLE). Cohort studies have reported that PAH prevalence in SLE varies widely between 0.5% and 43%. In some cases, PAH is the first manifestation leading to SLE diagnosis. We report two cases with different approach of the diagnosis of pulmonary hypertension in SLE patient.
Case: The first case was a 41 years old female admitted to our hospital with chief complain of dyspnea, cough, and bloating stomach. Patient had no previous history of heart disease. We diagnosed the patient with right heart failure. We performed transthoracic echocardiography and the result was high probability of pulmonary hypertension. Then we proceed to investigate the cause of pulmonary hypertension according to European Cardiac Society Guideline for Pulmonary Hypertension. We performed several examination including chest x-ray, trans esophageal echocardiography, thoracic multi slice computed tomography, right heart catheterization and laboratory test for connective tissue disease. The laboratory result showed that patient suffered from SLE. Finally, patient was diagnosed with PAH-associated SLE. The second patient was 49 years old female with chief complained of cough and dyspnea which worsened with activity. Patient already diagnosed with SLE 1 year before admission. This patient was also diagnosed with right heart failure and we performed transthoracic echocardiography to this patient. The result from the transthoracic echocardiography conclude that the patient was suffered from pulmonary hypertension. We did not perform right heart catheterization to this patient and we diagnosed patient with SLE associated pulmonary arterial hypertension. Then patient was given medication for PAH. We evaluate therapy response in this patient with transthoracic echocardiography and NT-Pro BNP examination routinely. From several times of evaluations, patient showed improvement in clinical symptom and echocardiography result. The value of NT-Pro BNP was also decreasing, indicate that patient was respond to the therapy.
Conclusion: Pulmonary hypertension could be the first manifestation leading to SLE diagnosis. We must consider SLE or other connective tissue disease such as systemic sclerosis as the underlying disease causing the pulmonary hypertension, especially in female patient. On the contrary, we also must consider PAH as one of cardiac complication that can suffered by SLE patients.

Keywords: pulmonary arterial hypertension; systemic lupus erythematosus; connective tissue disease; right heart failure; transthoracic examination

[PP-51]
A Woman with Another Space Inside Her Heart: The Role of Echocardiography and Cardiac MSCT

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ABSTRACT

Introduction An additional membrane or muscle band inside right ventricle divides it into two chambers, the proximal and distal one. It is a rare congenital malformation which makes up approximately 0.5-1 per cent of all congenital heart defects (CHD). The double chambers right ventricle (DCRV) most often present in children but rarely in adults. Transoesophageal Echocardiography (TOE) is the most effective tool in diagnosing a DCRV.
Case presentation A 36 years old woman, diagnosed with large ventricular septal defect (VSD) by transthoracic echocardiography (TTE), underwent a TOE to complement the preparation of surgical closure. The TOE finding instead revealed a septum or membrane that divide the right ventricle into two separate chambers, later confirmed by a cardiac computer tomographic scan (Cardiac CT). The patient is scheduled for a cardiac catheterization and surgical excision of the membrane with VSD closure to alleviate symptomps and improve the quality of life.
Conclusion The patient was diagnosed with double chamber right ventricle during preparation for surgery by TOE examination. We present this case in order to emphasize the rarity of this congenital heart disease.

Keywords: double chambers right ventricle; transoesophageal echocardiography; cardiac ct scan; ventricular septal defects; congenital malformations; congenital heart defects

[PP-52]
Sudden Death Due to Pulmonary Artery Dissection in Pregnancy – A Case Report

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ABSTRACT

Pulmonary artery dissection is extremely rare but it is a really life-threatening condition, make significant morbidity and mortality for both the mother and the foetus when it happens. Most patients die suddenly. The main cause of pulmonary artery dissection is pulmonary hypertension associated with congenital heart disease. What we are reporting is a rare case of a 28-year-old female patient, 30 weeks of pregnancy. The patient had severe dyspnea, and the suspicious of pulmonary artery dissection was confirmed by clinical manifestation and echocardiography. The patient die suddenly. We also report its etiology, clinical manifestations, and management.

Keywords: Pulmonary artery dissection; pulmonary hypertension; pregnancy

[PP-53]
Pericardiocentesis Ending in the Pulmonary Artery

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ABSTRACT

Introduction: Pericardiocentesis is an invasive procedure for treatment of large pericardial effusion or cardiac tamponade and for diagnostic purposes. In significant pericardial effusions, echocardiography-guided pericardiocentesis has high success rates of >95% with relatively little risk. As with any invasive procedure, complications may occur. Those most often associated with this life saving procedure are cardiac dysrhythmias, cardiac puncture, pneumothorax, coronary-vessel injury, peritoneal puncture, liver injury, and pericardiocentesis can also result in death. The purpose of this case report is that we can better understand pericardiocentesis including techniques, procedures and complications. Early diagnosis and proper management can reduce morbidity and mortality due to complications of pericardiocentesis.
Case Presentation: A 53-year-old woman with a major complaint of shortness of breath. Patient was diagnosed as large pericardial effusions without signs of cardiac tamponade with underlying lung adenocarcinoma with EGFR (-). Patients performed pericardiocentesis urgency (score 9.5) on the subxyphoid approach with echocardiographic guidance. In the first 24 hours after pericardiocentesis, the patient is stable, there are no signs and symptoms of pericardiocentesis complications. On the 3rd day of treatment, the patient experienced complications of pericardiocentesis, installation saline solution show a pigtail catheter that is estimated to enter the right atrium then the right ventricle to the pulmonary artery. Patients performed second pericardiocentesis on the apical side. Patient is planned for thoracic surgery.
Conclusion: Pericardiocentesis complications are rare. Operators must understand heart anatomy, techniques and procedures to minimize the risk of complications. Complications can occur during action or after pericardiocentesis is complete. Minimizing catheter manipulation in high-risk patients is expected to prevent the appearance of pericardiocentesis complications.

Keyword: Cardiac tamponade; cardiac perforation; pericardiocentesis

[PP-54]
A Case Report :Typical Electrocardiography Findings in Massive Acute Pulmonary Thromboembolism in a Sixteen Years Old Patient

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ABSTRACT

Introduction:Acute pulmonary thromboembolism(PTE) in the pediatric population is relatively rare case. PTE have significant diagnostic challenge. Electrocardiographic (ECG) characteristic may have a role in making early diagnosis of PTE.
Objective. We report a rare case of acute pulmonary thromboembolism in pediatric and review how to diagnosis and therapy in emergency setting.
Case report:A 16 years old male came to ED with severe dyspnea and chest pain since in 6 days before admission and increase in intensity at admission day. Patient was compos mentis with blood pressure 100/60 mmHg after 30 minutes blood pressure descend 80/60, heart-rate 116 bpm regular,and respiratory-rate 28.Physcial examination of lung and heart auscultation normal. 12-lead ECG show T-wave inversion in the right precordial leads(V1,V2,V3).Patient diagnosed as massive acute pulmonary thromboembolism. Patient given intravenous thrombolytic and inotropic therapy.After patient was stable, examined echocardiography with severe tricuspid regurgitation and performed pulmonary hypertension.A diagnosis of suspect pulmonary artery thrombosis with primary pulmonary hypertension was made.
Discussion: Accurate and timely diagnosis of of acute pulmonary- thromboembolism(PTE) is critical. One of the non-invasive investigation is 12-lead ECG. Sinus tachycardias, ST-segment, and T-wave inversions in the right precordial leads (V1,V2,V3), S1Q3T3 pattern, and right bundle branch-block are the most frequent ECG abnormalities. ECG finding were T-wave inversion in the right precordial leads (V1-V4) is the most specific and can become clues for clinician to diagnose toward acute PTE. Patient with clinical condition and ECG characteristic consistent with acute PTE accompanied by hemodynamic compromise have strong reason for undergo intravenous thrombolytic therapy for patient's life saving.Recent PTE guidelines recommend thrombolytic therapy in massive PTE to reduce in-hospital mortality.
Conclusion:,ECG can be practical guide and quick clues for considering clinical decision in emergency setting where rapid diagnosis and therapy should be made. Intravenous thrombolytic therapy must be given in massive PTE patients to reduce in-hospital mortality.

Keywords: acute pulmonary thromboembolism; primary pulmonary hypertension; electrocardiography

[PP-55]
Myocardial Bridging : The Forgotten Cause of Ischemic Heart Disease A Case Report

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ABSTRACT

Myocardial bridging is a rare congenital anomaly of the coronary artery in which a segment of an epicardial coronary artery takes an intramuscular course. The forming of a tunneled intramuscular course under a bridge of overlying myocardium frequently result in vessel compression during systole. This coronary anomaly is usually a benign condition, but it can be associated with adversed complications including angina, myocardial ischemia, acute coronary syndromes, left ventricular dysfunction and stunning, arrhythmias, and even sudden cardiac death. The middle segment of left anterior descending coronary artery (LAD) is the most commonly involved site. A number of diagnostic modalities have been used to assess its anatomic-morphological and functional significance such as coronary angiography, intramuscular Doppler, Intravascular Ultrasound, Fractional Flow Reserve, Cardiac Computed Tomography (CT) and other proposed diagnostic techniques. A 50 years old female came to Gadjah Mada Academic Hospital with chief complain of exercise-induced chest pain that is usually appears at rest. The patient also reported a series of exercise-induced palpitation. Heart rate and blood pressure were within normal limit prior consumption of antihypertension. The exercise test result was suggestive for ischemia but accompanied by arrhythmias. Cardiac CT showes zero calcium plaque burden with minimal mild stenosis at LAD proximal-mid and superficial myocardial bridging at LAD mid. Exercise-induced chest pain, should be considered as an initial feature of an ischemic heart disease including myocardial bridging. That would require some modalities to support the diagnosis such as a exercise test and cardiac CT can be the preferred modality for myocardial bridging diagnosis since it is a non invasive examination and is superior to angiography.

Keywords : Myocardial Bridging; ischemic heart disease; chest pain; cardiac CT; exercise test

[PP-56]
Adverse Outcome in Advanced Pregnancy with Rheumatoid Heart Disease; A Case Report

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ABSTRACT

In developing countries, sequelae of rheumatic fever often constitute the majority of women with heart disease; whereas in developed countries, it is the congenital heart diseases. Pregnant women with severe mitral stenosis tend to experience clinical decompensation with approximately 50% mortality. In this report, we present a 28-yr-old women (gravida, 2; para, 1), at 32 weeks gestational age, was admitted to RSUD. Dr. Sardjito Hospital on 6th April 2018 with complaining shortness of breath accompanied by cough with phlegm since 2 days before she decide to hospital. A month before, patient admitted to hospital on the same complaint, she was suggested to hospital stay and termination of pregnancy, but refused. She received furosemide therapy 40 mg, digoksin 0.25 mg, sophen 2.x2.50 mg. She has history of Mitral Stenosis (MS) severe and Tricuspid Regurgitation (TR) moderate since a year ago, and regularly visit RSUD. Sukoharjo for treatment. Since then, she has been educated about the risk of pregnancy and advised not to get pregnant. On 15th April 2018, she was diagnosed with Pulmonary Hypertension (PH) severe, CHF due to MS severe and TR moderate (WHO Class IV). An echocardiogram shows Mitral Valve Area (MVA) of 1cm^2, Ejection Fraction (EF) of 61%. The echocardiography confirmed the severe uncontrolled Atrial Fibrillation with Rapid Ventricular Response (AF RVR) and Non Sustained Ventricula Tachycardia (VT). In the interest of the mother abortion was suggested. At 8 AM, patient presented shortness of breath and developed heavy dyspnea in a few hours. Before late night, patient was moved to emergency room before declare dead in ICCU. This case illustrates the significant mortality risk with uncorrected severe rheumatic heart disease.

Keywords : Rheumatic heart disease; Mitral stenosis; Pulmonary hypertension; Cardiac failure

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A Case Report on Takotsubo Cardiomyopathy: Diagnosing The "Broken Heart Syndrome"

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ABSTRACT

Introduction: "Broken Heart Syndrome" or Takotsubo cardiomyopathy (TCM) is an acute, reversible episode of stress-induced cardiomyopathy that mimics acute myocardial infarction (AMI) and characterized by transient systolic dysfunction presented with apical ballooning of the left ventricle. This results in similar shape of an octopus pot used in fishing which is known as "Tako-tsubo" in Japanese. This is one of the underlying causes of myocardial infarction with non-obstructive coronary arteries (MINOCA). MINOCA can be presented in all proportion of AMI, ranging between 1-14%. It is important to differentiate underlying causes and consider TCM as diagnosis because directed therapy for the underlying cause is strongly needed to improve prognosis.
Case Presentation: A 42-years-old Caucasian female was presented to emergency department (ED) with chest pain. The chest pain began 5 hours before coming to ED, relieved after rest but continued with intermittent episodes afterwards. The pain was pressure-like, located substernally, and radiated to the back and left arm. Cardiovascular risk factor is hypertension since 5 years ago controlled with amlodipine. There were no spell episodes of headaches, palpitations, and diaphoresis. Her husband had passed away 3 days ago.
The vital sign showed blood pressure of 160/90, pulse of 102x/m, other sign was in normal range. Physical exam was considered normal. Initial ECG showed normal sinus rhythm, biphasic T wave in III, avF and hyperacute T wave in V2-V5. Second ECG showed normal sinus rhythm, biphasic T wave in V1-V2 and inverted T wave in V3-V6. Chest x-ray revealed no acute disease. Laboratorium results were Troponin T of 131 ng/L (normal value <50ng/L), D-dimer of 0.1 mg/L (normal value <0.3mg/L), other laboratorium value was in normal range.
The patient was initially assessed as NSTEMI and underwent cardiac catheterization that revealed normal coronary arteries. Echocardiography showed dilated apical LV, concentric LVH, no thrombus and PE, MR mild, apical hypokinesia, reduced LV function with EF of 46% and diastolic relaxation dysfunction. Patient was then assessed as TCM and treated with aspirin, enoxaparin, β-blocker and ACE inhibitor. After medical treatment, patient's symptoms improved.
Discussion: Generally, the working diagnosis of MINOCA is made in patient presenting with universal AMI criteria, non-obstructive coronary arteries on angiography (defined as no coronary artery stenosis ≥50%) and no clinically specific cause for the acute presentation. Universal AMI criteria above is defined by positive cardiac biomarker and at least one of the following: symptoms of ischaemia; new or presumed new significant ST-T changes or new LBBB; development of pathological Q waves; imaging evidence of new loss of viable myocardium or new regional wall motion abnormality (RWMA); intracoronary thrombus evident on angiography or at autopsy.
There are several causes that can contribute to the differential diagnosis for MINOCA, it can be grouped into: secondary to epicardial coronary artery disorders (e.g. atherosclerotic plaque rupture, coronary dissection without CAD) (MI type 1); imbalance between oxygen supply and demand (e.g.

coronary artery spasm and coronary embolism) (MI type 2); coronary endothelial dysfunction (e.g. microvascular spasm) (MI type 2); and secondary to myocardial disorders without involvement of the coronary arteries (e.g. myocarditis or Takotsubo cardiomyopathy).

To diagnose, after ruling out obstructive CAD, the use of echocardiography or left ventriculography should be considered in the acute setting to help diagnose TCM. Pulmonary embolism should be considered as a possible cause, D-dimer can be used to exclude this diagnosis. Cardiac magnetic resonance (CMR) is the key diagnostic tool that should be conducted within 2 weeks to identify etiological cause.

The revised Mayo clinic diagnostic criteria for TCM include: transient RWMA of LV (often with a stressful emotional/physical trigger), absence of obstructive CAD, new ECG abnormalities (ST-T changes) or modest elevation in cardiac troponin, and absence of pheochromocytoma and myocarditis. TCM cannot be diagnosed with certainty in the acute phase as the definition requires follow-up imaging to document recovery of left ventricular function.

TCM is generally presented in women accounting for 80-90% of cases, typically postmenopausal, with age ranging between 62-76 years. In comparison with ACS, patients with TCM had significantly higher rates of neurological or psychiatric disorder. Estimates of 10-year outcome for major adverse cardiovascular events and death was 9.9% and 5.6%. The exact pathophysiology of TCM remains unclear.

Empiric therapeutic strategies may include the use of cardioselective β-blockers in those with left ventricular outflow tract obstruction and ACE inhibitors in those with persistent left ventricular dysfunction, mechanical support in cardiogenic shock, and consideration of short-term antithrombotic medications given potential prothrombotic mechanisms.

Conclusion: TCM has important implication because it mimics that of an AMI and it is one of the potential etiology for MINOCA. Diagnosing TCM may be challenging but with increased awareness it can be diagnosed more frequently because it is important in choosing the rational treatment. Prospective studies are needed to determine more accurately the incidence, diagnosis and pathophysiology of TCM.