Overlap in Patient with Functional Dyspepsia and Unspecified Functional Anorectal Pain

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ABSTRAK

Gangguan gastrointestinal fungsional (GGIF) mewakili gangguan yang sering dijumpai dan perlu mendapatkan perhatian dalam bidang gastroenterologi. Gangguan ini menyebabkan kecemasan, distress dan morbiditas. Pasien dengan gangguan ini sering memperlihatkan manifestasi klinis secara tumpang tindih. Pasien dispepsia fungsional seringkali tumang tindih dengan gangguan gastrointestinal lain, termasuk nyeri anorektal fungsional. Keadaan tumpang tindih ini dapat menimbulkan keluhan yang makin berat, kualitas hidup yang lebih buruk dan skor somatisasi yang lebih tinggi, dan pasien mengalami kecemasan, depresi atau insomnia lebih sering dibandingkan pasien yang tanpa problem tumpah tindih. GGIF ditegakkan berdasarkan kriteria Rome III dan eksklusi penyakit organik. Pendekatan multimodalitas dibutuhkan dalam mengatasi pasien yang menderita gangguan gastrointestinal fungsional. Pada tinjaun kasus ini, dilaporkan seorang pasien laki laki menderita gangguan dispepsia fungsional dan nyeri anorektal fungsional tidak spesifik.

Kata kunci : *gangguan gastrointestinal fungsional, dyspepsia fungsional, nyeri anorektal fungsional*

ABSTRACT

Functional gastrointestinal disorders (FIGD) represent a common and important class of disorders within gastroenterology. FIGD are a cause of great anxiety, distress and morbidity. FIGD disorders maybe manifest as overlapping syndrome. Patients with functional dyspepsia (FD) show frequent overlapping of other gastrointestinal disease, such as functional anorectal pain. These overlap patients have more frequent or more severe symptoms, poor health related quality of life and higher somatization scores, and they are more likely to experience anxiety, depression or insomnia compared to non-overlap patients. These disorders were diagnosed according Rome III criteria and excluded structural diseases. Multimodalities approach should be used during treatment patient with FGID. It was reported a male patient with functional dyspepsia and unspecified functional anorectal pain overlap.

Keywords: *Functional gastrointestinal disorders, functional dyspepsia, functional anorectal pain*

INTRODUCTION

Functional gastrointestinal disorders (FGID) represent a common and important class of disorders within gastroenterology that are characterized by persistent and recurring GI symptoms. The prevalence of FGID in Taiwan was 26.2%. Unspecified functional bowel disorder was the most prevalent (8.9%), followed by functional dyspepsia (5.3%), irritable bowel syndrome (4.4%) and functional constipation (4.4%).[1] The large number of patients suffering from FIGDs, as well as the high frequency of functional GI symptoms in general within the population, the health care burden produced by the uses of medical services and medications for these conditions, and its eventual outcome in terms of work absenteeism are well known.[2] FIGD disorders maybe manifest as overlapping syndrome. Patients with functional dyspepsia (FD) show frequent overlapping of other gastrointestinal disease such as irritable bowel syndrome (IBS), gastroesophageal reflux disease (GERD), gastroparesis, functional anorectal pain and non-gastrointestinal disease (fibromyalgia, chronic fatigue, painful bladder syndrome). These overlap patients have more frequent or more severe symptoms, poor health related quality of life and higher somatization scores, and they are more likely to experience anxiety, depression or insomnia compared to non-overlap patients.[3,4] In this case report we described how to diagnose and manage patient with functional dyspepsia and functional anorectal pain overlap.

CASE REPORT

A 36 years' man was referred to Gastroenterology and Hepatology Clinic, at Sardjito General Hospital, Yogyakarta, Indonesia, because of chronic dyspepsia and anorectal pain. He suffered from bloating, early satiety, nausea, loss of appetite, and anorectal pain about 3 years. He told that anorectal pain was sharp, precipitated or worsened by defecation (arising about 30 minutes after defecation), sitting and the pain lasting for some hours. According visual analogue scale (VAS), the severity of anorectal pain was 7 – 8. He described no change in bowel habit, and had average 5 – 7 bowel movements (defecation) weekly, passed with minimal straining, no rectal bleeding and mucus discharge. The urinary habit was normal. There was no history of back pain, trauma or pelvic surgery. His unresolved symptoms caused emotional distress, impaired vitality, problems with food and drink, impairment in daily function (inability to work), and the body weight reduced about 10 kilograms.

General physical examination, including abdominal and neurological examination were normal. Anal examination showed no perineal disease, hemorrhoid, fissures or mass. Anal canal tone and squeeze were normal (no tenderness with posterior traction of the puborectalis muscles). Palpation of the coccyx is not painful and no masses were felt. A complete blood count, sedimentation rate and abdominal ultrasound were normal. Coccyx x-ray, abdominal and pelvis multi-slice CT scan were normal. Gastroscopy examination was also normal. During colonoscopy examination there were not found tenderness, erosion, bleeding, ulcer, or mass in recto-sigmoid area, except of first grade or mild internal hemorrhoid. A nutrient drink test was conducted for detecting impaired gastric accommodation. After fasting about 8 hours, he was asked to ingest a nutrient drinking test (UltraMilk which contains 0.6 kcal/mL). The maximum tolerated volume that ingested by the patient was 650 mL. VAS score (100 mm scale) was used to measure postprandial dyspepsia symptoms. The VAS score for postprandial symptoms were; for nausea 70, bloating 100, epigastric pain 0, fullness 100, and total symptoms score was 270. The diagnosis of the patient was functional dyspepsia with

unspecified functional anorectal pain. Information and education, low fat diet, domperidone 3 times daily, lansoprazole 2 times daily, amitriptyline 12.5 mg in the night and spiritual approach (latihan pasrah diri) were prescribed for managing these problems.

DISCUSSION

The Rome III have classified FGIDs into 6 major domains for adults: 1) functional esophageal, 2) functional gastroduodenal (functional dyspepsia, belching disorders, nausea and vomiting disorders, rumination syndrome), 3) functional bowel disorders, 4) functional abdominal pain, 5) functional gallbladder and sphincter of Oddi disorders, 6) functional anorectal disorders (functional fecal incontinence, functional anorectal pain).[5] Drossman (2006) described the pathophysiology of FGID conceptual model. In this model, interactions between early in life conditions (genetic and environment), psychosocial factors (life stress, psychologic state, coping to stress, social support), physiology (motility, sensation, inflammation, altered bacterial flora, brain – gut axis) induced GI symptoms and outcome (medications, medical doctor visits, quality of life).

Because routine test like x-rays, CT scans and other used for diagnosing organic disorders are generally negative for people with FGID, diagnosing these disorders cannot be based on test results. Rome III criteria are used to establish the diagnose of FGID. According the Rome III criteria, functional dyspepsia is defined as the presence of symptoms thought originate in the gastroduodenal region in the absence of any organic, systemic, or metabolic disease likely to explain the symptoms, for the last 3 months with symptom onset at least 6 months prior to diagnosis.[6] Functional dyspepsia is now further subdivided into two new diagnostic categories: (1) meal-induced dyspeptic symptoms or postprandial distress syndrome (PDS), characterized by postprandial fullness and early satiation, and (2) epigastric pain syndrome (EPS), characterized by epigastric pain and burning.[7]

Dysmotility (impaired gastric accommodation and visceral hypersensitivity) is a main focus of research in the pathophysiology of dyspepsia. In functional dyspepsia, impairment of accommodation has been found in 40% of cases.[8] Drink test were originally developed as a noninvasive means to assess upper digestive sensations and, perhaps, gastric accommodation. It procedures were developed as a symptom provocative technique for the patients with dyspeptic complaints.[9] Accommodation is the ability of the stomach to distend appropriately to the size and timing of a meal, allowing an increase in gastric volume without an increase pressure. Because of impaired gastric accommodation, meal ingested was distributed to distal stomach (antrum).[8] Meal ingestion is an important trigger for dyspeptic symptoms in majority of the FD patients.

Functional dyspeptic patients will often achieve satiation at lower drink test volume and report greater symptoms, than controls. Loza et al[10] reported that FD patients ingested (Nutren Nestle) maximum volume 652±168 mL compared controls 1278±275 mL (p= 0.001) and total score dyspepsia symptoms for FD patients 187±26 compared controls 64±8.9 (p=0.001). Using the 10th percentile as the lower limit of the normal range, volume < 800 mL of *nutridrink* for men and < 600 mL for women were considered abnormal.[9] Our patient ingested only 650 mL with total dyspeptic symptoms was 270. This condition supported that the patient suffered from impaired gastric accommodation. The diagnostic of our patient was functional dyspepsia that confirmed according The Rome III criteria.

According Rome III, functional anorectal pain is divided into chronic proctalgia (levator ani syndrome and unspecified functional anorectal pain) and proctalgia fugax. Chronic proctalgia is a general term for chronic or recurring pain in the anal canal or rectum. Other names considered synonymous with chronic proctalgia are levator ani syndrome, chronic idiopathic perineal pain, pyriformis syndrome, and pelvic tension myalgia. Chronic tension or spasm of the striated muscles of the pelvic floor (levator ani muscles: pubococcygeus and iliococcygeus) is commonly assumed to be the pathophysiological basis for chronic proctalgia.[11]

Table 1 show diagnosis criteria for functional anorectal pain according Rome III. The two functional anorectal pain disorders (chronic proctalgia and proctalgia fugax) are distinguished on the basis of duration, frequency, and characteristic quality of pain. It is necessary

to exclude other causes of anorectal pain such as ischemia, fissures, and inflammation. In our case, the diagnosis was unspecified functional anorectal pain that established based on the Rome III criteria, and it was supported by no other causes of structural anorectal diseases.[5,12]

Diagnostic approach for patient with chronic or recurrent anorectal pain are history taking, physical examination, complete blood count, erythrocyte sedimentation rate (ERS), biochemistry panel, flexible sigmoidoscopy (or colonoscopy), and perianal imaging with ultrasound or MRI, to exclude structural diseases (figure 1).[13] When structural diseases were excluded and the pain is not associated with bowel movements or eating, functional anorectal pain should be thought.

The differential diagnosis functional anorectal pain is anal fissure, coccygodynia, and pudendal neuralgia. Patient presenting with anal fissure complain of pain during and after passage of the stool.

Functional anorectal pain*	Diagnostic criteria
Chronic proctalgia: 1a. Levator ani syndrome 1b. Unspecified functional anorectal pain	Chronic or recurrent rectal pain or aching Episodes last at least 20 minutes Exclusion of other causes of rectal pain such as ischemia, inflammatory bowel disease, cryptitis, intramuscular abscess and fissure, hemorrhoids, prostatitis and coccygodynia
	Symptom criteria for chronic proctalgia and tenderness during posterior traction on the puborectalis
	Symptom criteria for chronic proctalgia but no tenderness during posterior traction on the puborectalis
Proctalgia fugax	Recurrent episodes of pain localized to the anus or lower rectum Episodes last from second to minutes There is no anorectal pain between episodes

Table 1. Diagnosis criteria for functional anorectal pain according Rome III (Drossman, 2006). [5,12,13]

*Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

On digital examination, a chronic fissure feels rough, raised, or fibrotic in the mid distal anal canal. [14] Coccydynia is defined as pain arising in or around the coccyx, usually triggered by prolonged sitting on hard surfaces. [14] In this case coccygodynia was excluded because there was no pain during manipulation of the coccyx, no history of trauma and normal coccyx on x- ray investigation. Pudendal neuralgia is a chronic pain in the perineal area secondary to entrapment and injury to the pudendal nerve in its musculo-osteo-aponeurotic tunnel between the sacrotuberal and sacrospinal ligaments, in the absence of organic diseases that may explain the symptoms. Pudendal neuralgia was not concordance with this case, because the superficial pain, burning sensation, numbness, or paresthesia in the gluteal, perianal, and or genital area were not found. [14]

Patients suffered from FGID, especially functional dyspepsia and functional anorectal pain need multimodalities approach, such as: information and education, reassurance, diet and medication, antidepressant treatment, psychological support, electrical stimulation of pelvic floor muscles, biofeedback to teach relaxation the muscles, massage of the levator ani muscles, botulinum injections. FGID are a cause of great anxiety, distress and morbidity. Psychological treatment helps to reduce anxiety levels and symptoms. [5] The intent-to-treat analysis showed that 87% reported adequate relief of rectal pain following bio-feedback, compared with 45% for electrical stimulation and 22% for digital massage, relief was well maintained for 12 months of follow up.[12] Antidepressants are used in the of functional dyspepsia and abdominal pain based on three propositions: 1) antidepressants could reduce anxiety and depression, 2) antidepressants have central analgesic actions, 3) these drugs may have local pharmacological actions on the upper gut. [15] Park et al [16] reported that low dose amitriptyline (10 mg at bedtime) combined with proton pump inhibitor for functional dyspepsia was more effective than a double dose of PPI. Clinicians prescribing antidepressants should keep in mind that the therapeutic benefit may take 4 to 6 weeks to achieve and treatment can be started at low dose. [17]

CONCLUSION

It was reported a patient with functional dyspepsia and unspecified functional anorectal pain overlap. These disorders were diagnosed according Rome III criteria and excluded

structural diseases. Multimodalities approach should be used during treatment patient with FGID.

REFERENCES

1. Chang FY., Chen PH., Wu TC., Pan WH., et al. Prevalence of functional gastrointestinal disorders in Taiwan: questioannaire – based survey for adults based on the Rome III criteria. Asia Pac J Clin 2012; 21: 594 – 600.
2. Drossman DA., Dumitrascu DL. Rome III: New standard for functional gastrointestinal disorders. J Gastrointestin Liver Dis 2006 ; 15 : 237 – 241
3. Bun, R., Braden, K. Functional dyspepsia. *Therapeutic Advances in Gastroenterology 2010; 3: 145 – 164*
4. Fujiwara Y., Arakawa T. Overlap in patients with dyspepsia / functional dyspepsia. *J Neurogastrointestinal Motil 2014; 20: 447 – 457*
5. Drossman DA. The functional gastrointestinal disorders and the Rome III process. Gastroenterology 2006; 130: 1377 – 1390
6. Lacy, B.E., Talley, N.J., Locke, G.R., Bouras, E.P., et al. Review article: current reatment option and management of functional dyspepsia. *Aliment Pharmacol Ther 2012; 36: 3 – 15*
7. Geeraerts, B., Tack, J. Functional dyspepsia: past, present, and future. *J Gastroenterol 2008; 43: 251 – 255*
8. Kindt S., Tack J. Impaired gastric accommodation and its role in dyspepsia. Gut 2006; 55: 1685 – 1691
9. Jones, M.P. Satiety testing: ready for the clinic?. *World J Gastroenterology 2008; 14: 5371 – 5376*
10. Loza A., Schmulson M., Gomez S., Troche J., Diaz M. Maximum tolerated volume in drinking tests with water and a nutritional beverage for the diagnosis of functional dyspepsia. World J Gatroenterology 2005; 11: 3122 – 3126
11. Chiarioni G., Asteria C., Whitehead W. Chronic prostalgia and chronic pelvic pain syndromes: new etiologic insights and treatments. World J gastroenterology 2011; 17 : 4447 – 4455
12. Wald A., Bharucha AE., Cosman B., Whitehead W. ACG clinical guideline: management of benign anorectal disorders. Am J Gastroenterology 2014; doi : 10.1038/ajg.2014.190
13. Bharucha AE., Wald AM. Anorectal disorders. Am J Gastroenterology 2010; 105 : 786 - 794
14. Orenstein AE., Umar SB., Crowell MD. Common anorectal disorders. Gastroenterology & hepatology 2014; 10: 294 – 301
15. Talley N., Herrick L., Locke GR. Antidepressants in functional dyspepsia. Exp Rev Gastroenterol Hepatol 2010; 4: 5 – 8.
16. Park S., Lee HL., Lee HJ., et al. Low-dose amitriptyline combined with pump inhibitor for functional chest pain. World J gastroenterology 2013; 19: 4958 – 4965
17. Sperber AD., Drossman DA. Review article: the functional abdominal pain syndrome. Aliment Pharmacol Ther 2011: 33 : 514 – 524

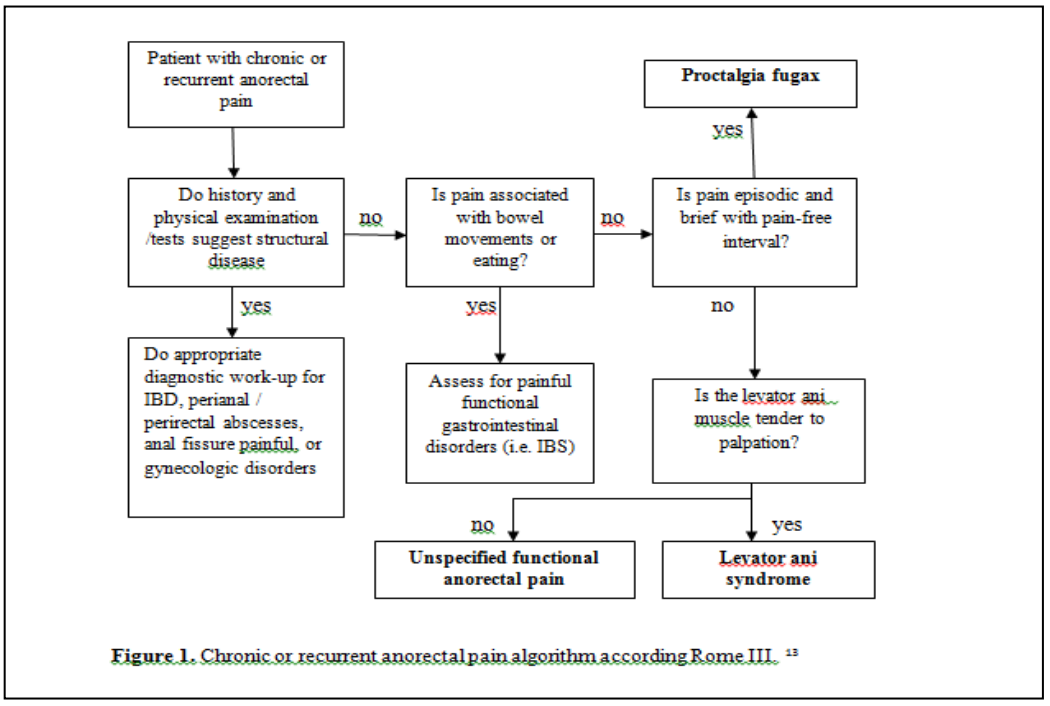

Figure 1. Chronic or recurrent anorectal pain algorithm according Rome III. [13]