

Irritable bowel syndrome as a cause of chronic abdominal pain

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Functional Gastrointestinal Disorders (FGID) are a frequent motive for health care needs in gastroenterology, thus causing serious problems socially and in family dynamics. We study the clinical characteristics and natural history of the Irritable Bowel Syndrome (IBS) in children and adolescents attending our outpatients' practice of pediatric gastroenterology, according to the new Rome criteria. We found that IBS is relatively frequent as a cause for functional Chronic Abdominal Pain (CAP) and that an interrogatory following Rome criteria is useful for its diagnosis.^b

Introduction

Chronic abdominal pain is a very frequent reason for consultation, constituting between 2% to 4% of visits to the primary care pediatrician and up to 50% to the pediatric gastroenterologist [2, 3].

In clinical practice, IBS is characterized by symptoms of chronic abdominal pain and defecation disorder. Pediatric IBS can be divided into subtypes analogous to adults reflecting the predominant stool pattern (IBS with constipation, IBS with diarrhea, IBS with constipation and diarrhea, and unspecified IBS). Although bloating and abdominal distension are commonly reported symptoms, its presence is not mandatory to accurately diagnose IBS.

IBS is one of the most frequent motives of FGIDs for adolescents, representing 3% of the motives for consultation in the primary care level, with a significant predominance in female sex; Between 10 and 20% of adolescents have symptoms consistent with this syndrome. Although its higher frequency is encountered in industrialized countries, as stated in the scientific literature, this disorder also appears in the third world [4, 5].

Pathogeny

IBS, which is considered a disorder of the brain-gut axis, is a disease of complex multifactorial origin, the central characteristic being the changes in the behavior of the intestinal smooth muscle; However, this abnormal motility of the intestinal smooth muscle is not the fundamental explanation of all the symptoms, which are determined by multiple factors, including motility disorders, visceral hypersensitivity, inflammation and immune dysfunction of the mucosa, gut-brain shaft dysfunction and psychosocial factors of childhood [6, 7, 8].

Visceral hypersensitivity may relate to the child's psychological distress (anxiety, depression, impulsiveness, anger). An intense serotonergic pathway has been identified involving 5HT₃ receptors in the intrinsic nervous system. These receptors are considered key in the perception of abdominal pain and in the regulation of gastrointestinal motility, which will lead to new treatment goals. Increased mucosal proinflammation

cytokines have been demonstrated and may be induced as a consequence of an acute infectious gastroenteritis (postinfectious IBS). Alterations in gut microbiome have been demonstrated, although it is not clear if these changes are the cause or result of IBS and its symptoms [6, 7, 9]. Noxious early life events, e.g. surgery, have been associated with a higher risk for developing abdominal pain in childhood, including IBS [3, 10, 11].

Methodological Aspects

Our aim was to determine the clinical characteristics and natural history of IBS in children and adolescents attending our outpatients' practice of pediatric gastroenterology, according to Rome criteria.

In the way to analyze the ultimate aspects in IBS diagnosis and treatment, and its relation with CAP, some documentary databases and registers were revised. Particularly, PubMed, Scielo and Latindex documentary databases and the Cochrane Specialized Register. The data related to irritable bowel syndrome until December 2017 were analyzed, as well as the treatment guidelines presented by different medical organizations based on the criteria of Rome and of Evidence-Based Medicine.

In order to know the frequency of IBS in our ambulatory consultation of pediatric gastroenterology a questionnaire and some tests were applied to all outpatients with CAP diagnosis within a 3 years period. In their first visit a questionnaire for symptoms was to be filled out by patients and/or parents or tutors and a complete physical examination was performed. The following tests were performed in all patients: hemogram, erythrocyte sedimentation rate, biochemical tests for tissue transglutaminase antibody, microbiological and parasitological examination of the feces, occult blood in stools, urine culture, electroencephalogram, metabolic tests in urine, upper gastrointestinal endoscopy and anathomopathological study as well as abdominal ecography to screen for organics causes. Patients meeting IBS criteria were selected. These data were loaded into a Epiinfo-6 program. Percentual distribution was the selected statistic method.

A review of the subject referring to childhood was carried out, and the most accepted concept and pathogenesis were included, as well as Rome criteria established for the diagnosis. Etiology, clinical diagnosis and diagnostic tests were emphasized. Some aspects of the treatment were analyzed.

According to Roma criteria the diagnosis is supported by a normal physical exam and growth. During the initial visits, the psychosocial history of the child and the family should be specified, it is necessary to establish a nutritional history, if there is an adequate intake of fiber in constipated patients, or an ingestion of sugars such as sorbitol and fructose in diarrhea. Bacterial gastroenteritis may be followed by the development of IBS in 5-10% of patients depending on the severity of the initial episode and the previous state of anxiety or depression [12, 13]. It should also be questioned about family dynamics, since there are studies in which it has been shown that adult patients with this pathology report a history of child abuse (physical, emotional and sexual) [10, 11]. It is necessary to be alert to warning signs of illness such as pain or diarrhea at night, weight loss, rectal bleeding, fever, arthritis, delayed puberty, etc.

Results

A total of 343 patients with functional CAP were considered, 41 (11%) of them with IBS, ranging between 5-15 years (mean 9.5) while the 53.6% ranged between 5-9 years; 22 (53.7%) were males and 19 females (46.4%). None had family history of IBD. The abdominal pain or discomfort was located in the hypogastrum in 28 (68.3%) and 13 in the periumbilical region (31.7%); 21 (51.2%) presented diarrheas, 8 (19.5%) constipation and 12 (51.2%) diarrhea and alternate constipation, 30 relief with defecation (73.2%); Giardiasis 9 (22%). A 12.2% presented malnutrition and 12.2% obesity. The time of evolution ranged between 3 months and more than 2 years, with 31.6% prevailing in more than one year.

Conclusions

IBS is relatively common as a cause of CAP, and questioning conducted according to Rome criteria is useful for diagnosis. For the majority of patients with IBS symptoms the Rome criteria showed to be useful as a diagnosis and follow up method. We consider that IBS is relatively frequent as a cause for functional CAP and that an interrogatory following Rome criteria can improve its diagnosis. Most children with IBS should be managed this way by primary medical care.

Notes

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- b. Original version of this article is Ref. [1]

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