

Giant Colon Diverticulum - Rare Condition: Case Report

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1. Abstract

A rare condition that affects patients with colonic diverticulosis is the giant colonic diverticulum (GCD), which has a diameter of over 4 cm. The giant colonic diverticulum affects men and women equally, achieving highest incidence in groups between 35 and 90 years old (average 65 years) and is usually located on the antimesenteric border of the sigmoid colon in 90% of cases. We report a case of giant colonic diverticulum diagnosed in a 76-year-old patient and describe the clinical signs and symptoms, laboratory tests, radiological findings and the therapeutic conduct performed. In this specific case, the location of the GCD in the sigmoid colon, inflammatory symptoms combined with alternative therapy based on conservative treatment, with no need for resection of the adjacent colon, are configured in a conduct of satisfactory value. The clinical presentation of GCD may remain asymptomatic for months or even years, produce nonspecific abdominal discomfort or manifest in the form of an acute abdomen. In view of the characteristics of the case, the scarce references in the world literature and because it details the conduct and follow-up of the patient affected by this disease, it is opportune to describe it.

2. Introduction

Large intestine diverticulosis refers to the presence of diverticula in the colon, mostly located in the sigmoid colon. It is a quite common condition, representing one of the five gastrointestinal diseases with the largest impact in terms of health costs for western society [1]. The prevalence of colonic diverticulosis increases with aging. It is less than 10% for the population under 40 years old, spanning to a third of the population over 45 years and is estimated to be between 50% and 66% for individuals over 80, reaching up to 80% of this elderly population [2]. A rare condition that affects

patients with colonic diverticulosis is the giant colonic diverticulum (GCD), which has a diameter of over 4 cm. First described in the literature by the French Bouvin and Bonte in 1946 and by the English in 19533. Since then, few cases have been described in the literature, with less than 150 cases published by the year 20084.

The giant colonic diverticulum affects men and women equally, achieving highest incidence in groups between 35 and 90 years old (average 65 years) and is usually located on the antimesenteric border of the sigmoid colon in 90% of cases [3,4,5]. They can also be found in the cecum and ascending, transverse and descending colon [1]. We report a case of giant colonic diverticulum diagnosed in a 76-year-old patient and describe the clinical signs and symptoms, laboratory tests, radiological findings and the therapeutic conduct performed.

3. Case Report

A 76-year-old female patient sought medical care presenting nonspecific and diffuse abdominal pain for about 40 days, with episodes of nausea and moderate reduction in intestinal transit. She reported febrile sensation but did not measure it. The patient was previously healthy and had no other complaints. On physical examination, she was afebrile and had stable vital signs, craniological and pulmonary auscultation without alterations. On abdominal physical examination she presented pain located in the hypogastric region with irradiation to the left iliac fossa and periumbilical region, partially palpable mass in the hypogastric region and without visceromegaly, also had positive Giordano sign. In the blood count, she presented 9000/ μ L leukocytosis with 68% neutrophils, 24% lymphocytes, 3% eosinophils and 5% monocytes. Platelets were within normal range (271,000 mm^3) as well as hemoglobin (14.0/ μ l). On qualitative urine examination it presented rare leu-

kocytes (6 leukocytes/field), red blood cells (5 red blood cells/per field) and slightly increased bacterial flora.

The tests of function and liver profile AST (23 mg/dl) and ALT (19 mg/dl) and renal profile (urea 54.8 mg/dl and serum creatinine 0.67 mg/dl) were within normal limits. Conventional abdominal radiography was requested showing a radio transparent finding of well-defined contours (balloon signal) (Figure 1) in the hypogastric

region. Subsequently, total abdominal ultrasound was performed, which did not present visible echoic alterations. Then, a computed tomography of the abdomen was performed, which demonstrated diverticular disease of the sigmoid colon and a smooth and regular cystic cavity with air/gas level, measuring 7.4 cm in diameter (Figure 2), located in the hypogastric region. In view of the clinical and imaging evidence, diverticulitis and GCD were diagnosed.



Figure 1A: The X-Ray showing a radio transparent finding of well-defined contours (balloon signal) in hypogastric region. A: frontal view.



Figure 1B: B: lateral view.



Figure 2A: The computerized tomography showing a diverticular disease of the sigmoid colon and a smooth and regular cystic cavity with air/gas level, measuring 7.4 cm in diameter (figure 2), located in the hypogastric region. A: Frontal view.



Figure 2B: B: Axial view.

Surgical therapy was rejected by the patient. Therefore, choosing to treat conservatively, were prescribed dexamethasone 10 mg daily for 10 days, trimebutine 200mg twice a day (morning and night) and calcium polycarbophil 625 mg twice a day. A diet rich in fiber and liquids was recommended. The patient evolved with symptomatic improvement and is currently in good general condition, healthy, hydrated, acyanotic, anicteric and afebrile.

4. Comments

The clinical presentation of GCD may remain asymptomatic for months or even years, produce nonspecific abdominal discomfort or manifest in the form of an acute abdomen, a consequence of a series of complications such as colon perforation, volvulus, and small bowel obstruction due to adhesions to the loops of the small intestine [1,6,7]. The differential diagnosis of this condition should be very well performed to avoid confusion with diagnosis of sigmoid and cecal volvulus, intestinal duplication cyst, intestinal cystic pneumatosis and Meckel diverticulum [1,6,7]. Diagnostic imaging methods such as x-ray, computed tomography (CT), magnetic resonance imaging (MRI) and barite enema have considerable positive value to aid in the diagnosis of GCD. On the other hand, colonoscopy does not appear to have clear benefits in the investigation of this situation [5].

The pathophysiology of GCD is poorly understood. Thus, to try a better understanding of this pathology, several theories were formulated that try to explain the different histological patterns, classifying them into pseudo-diverticula; inflammatory drugs; and true or congenital diverticulum [1,8].

1. Pseudodiverticula: It is the most frequent form and represents 90% of cases. Its wall is formed by the mucous and submucosal layers that come out through the muscle layer in an area of weakness. It is a common diverticulum that progressively increases in size secondary to infection and subsequent inflammation of the colon. Diverticulum growth could be explained by unidirectional valve mechanism and infection by anaerobic germs [8].

2. Inflammatory: Secondary to serosa perforation and the formation of an abscess outside the colonic wall, which progressively increases in size and the wall of this diverticulum is formed by fibrous tissue [8].

3. True or congenital diverticulum: Where the wall of the diverticulum contains all layers of the colon wall, corresponding to a small percentage of the diverticula. It's usually a pediatric pathology. Inside there may be the presence of heterotropic tissue, such as urothelium [9].

The present case report was unable to classify which type of diverticulum was related to the patient, since there was no surgical removal of the GCD and consequent histological evaluation.

5. Conclusion

In view of the characteristics of the case, the scarce references

in the world literature and because it details the conduct and follow-up of the patient affected by this disease, it is opportune to describe it. In this specific case, the location of the GCD in the sigmoid colon, inflammatory symptoms combined with alternative therapy based on conservative treatment, with no need for resection of the adjacent colon, are configured in a conduct of satisfactory value.

6. Conflict of Interest

The authors declare that they have no conflict of interest.

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