

Colonic Crohn's Disease: Epidemiological and Evolutionary Profile

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Abstract

Crohn's disease is a chronic inflammatory disease that can affect the entire digestive tract. It is characterized by a heterogeneity of manifestations and a complexity of its physiopathological mechanisms. The therapeutic management must take into account the phenotype, the localization and the evolutionary profile of each patient.

Our aim is to study the prevalence of Crohn's disease with colonic localization, the characteristics of this entity, the particularities of therapeutic management in our patients and the analysis of the predictive factors of complications.

Keywords: *Colonic Crohn's Disease; Epidemiological and Evolutionary Profile*

Introduction

Materials and Methods

This is a retrospective, descriptive study of patients hospitalized and followed up in medicine B department of Ibn Sina Hospital in Rabat, over a period of one year from 08/2020 to 08/2021. Epidemiological and clinical parameters were studied, as well as the evolutionary profile and the therapeutic management.

Data collection was done using a pre-established exploitation form, and the analytical study was done using the SPSS software. The multivariate analysis was done by the binary logistic method with a significant $p = 0.05$ and the comparisons were done using the Chi-square test.

Results

Fifty-two patients with colonic Crohn's disease were collected out of a total number of 156 patients followed for Crohn's disease, giving a prevalence of 33.3%. A female predominance was found, 37 women for 15 men with a sex ratio of 2.46. Active smoking was found in 6 patients (11%). As for the phenotype, according to the Montreal classification: B1 was found in 34 patients (65%), B2 in 12 patients (23%), B3 in 12 patients (23%). Ano-perineal lesions were found in 19 patients (36.5%) and extra digestive manifestations were diagnosed in 3 patients (5.7%) including 2 cases of Pyoderma gangrenosum and one case of peripheral arthralgia.

In 21 patients (40.3%) the disease was revealed by a severe acute colitis, in 30 cases (57.8%) by a mild or moderate relapse and in one case by a sub-occlusive syndrome of pseudo-tumoral Crohn's (1.9%).

As an initial treatment, 23 patients (44%) received corticosteroid therapy, 14 (27.2%) were put on sulfasalazine and 15 patients (28.8%) underwent surgery for pseudotumor crohn's in one patient and corticoreistant colitis in 14 patients.

Concerning the background treatment, 25 patients received sulfasalazine (48%), immunosuppressants in 10 patients (19%), anti TNF in 9 patients (17%) and 6 patients (15.4%) were on combo therapy.

The evolution under treatment was marked by the occurrence of complications in 14 patients (27%) such as colonic fistulas in one patient (2%) operated, and stenosis in 13 patients (25%) of which 2 were asymptomatic and treated medically, 4 had a per endoscopic dilatation and 7 operated.

The comparison of the rate of colonic stenosis occurrence under different treatments showed a higher value in patients under sulfasalazine with a $p = 0.05$.

The multivariate analysis found the following associated factors: smoking, ano-perineal lesions and treatment with biotherapy with respectively OR 3.03 $p = 0.01$, OR 2.32 $p = 0.002$, OR 0.67 $p = 0.057$

Discussion

The colonic location of Crohn's disease (CD) is isolated in about one third of patients. According to a Swedish cohort: Of more than 500 patients (26%) with colonic Crohn's disease out of a total of 1936 patients followed for Crohn's disease, segmental colonic involvement was found in 40% of cases, left or right colonic involvement in about 30% of cases and pancolitis in 30% of cases [1].

Anorectal fistulas, strongly associated with CD, are reported in nearly 40% of patients, mainly in those with colorectal involvement [2].

Regarding the behavior of the disease, a review [3] of cohorts showed that 56 - 81% of patients with CD had an inflammatory phenotype at the time of diagnosis, 5 - 24% a stricturing behavior, and 4 - 23% a penetrating behavior.

While the location of Crohn's disease remains relatively stable over time, the disease behavior changes over time. Population-based studies have shown that while the majority of patients have inflammatory disease at diagnosis, up to two-thirds will develop a complicated stenosing and/or perforating form during the course of the disease [4].

During the course of Crohn's disease, and due to the persistence of the inflammatory process, complications may arise. In a study [5] of 2002 patients in France, 1199 (60%) patients had developed a complication: stenosis or fistula 20 years after diagnosis. In an American study [6], the cumulative risk of developing an intestinal complication: stenosis or fistula was 19% at 90 days, 22% at 1 year, and 51% at 20 years after diagnosis.

The inflammation of the digestive tract that characterizes colonic Crohn's disease can progress to fibrosis and reduction of the digestive lumen, thus the stricturing form of the disease.

This is a frequent complication, resulting from the active and progressive nature of the disease, surgical anastomosis or strictureplasty. In spite of the important therapeutic advances of the last few years, it seems that the incidence of stenosing complications has not decreased [7]. In a Hungarian general population study that included 640 patients with CD, 9% had colonic stenosis during a median follow-up of 12 years [8]. A US study (2008 - 2014) also reported a prevalence of colonic stenosis of 9% [9].

The management of colonic stenosis during IBD is complex. It depends on its location, length, symptomatic nature, degree of inflammation, the presence of associated penetrating complications, the presence of dysplasia or the general (and IBD-specific) condition of

the patient. The management of colonic strictures in IBD should be multidisciplinary in cooperation with a surgeon and a radiologist. Therapeutic decisions should be made in a dedicated IBD consultation meeting when possible.

Interventional endoscopy is emerging as a treatment for IBD, especially for strictures associated with Crohn's disease. The goals of endoscopic treatment are to relieve obstruction and associated symptoms, delay or avoid surgery (thus preserving the bowel), and improve the quality of life of IBD patients [10].

Surgery is rarely curative; the goal of surgery is to relieve symptoms, improve quality of life (QOL), and maintain bowel continuity, when possible. Complications of the disease are the most common indication for surgery.

However, the invasive nature and the risk of postoperative complications of surgical treatment make endoscopic dilatation a good alternative in the management of colonic stenosis in Crohn's disease [11].

The recent ECCOESGAR consensus recommends strict surveillance of colonic stenosis in IBD and emphasizes that surgery should be considered if necessary [12]. The joint ECCO-ESCP consensus suggests endoscopic dilatation or segmental colectomy for colonic strictures complicating CD [9].

The efficacy of immunosuppressive or bioterapy treatments on colonic stenosis has never been studied. The current data come from work that has included patients with cephalic stenosis. Regarding amino-salicylic drugs, studies consider that Mesalasin is not effective in the treatment of Crohn's disease [13]. However, there are some data concerning the effectiveness of Sulfasalazine in inducing remission in colonic Crohn's disease, but not in maintaining remission [14]. Nevertheless, we did not find any study analyzing the treatment with amino-salicylic drugs as a factor associated with the occurrence of colonic stenosis during colonic Crohn's disease.

Colon perforation is another possible complication of colonic Crohn's disease secondary to the characteristic transmural inflammation. It is common and can and does result in complications such as abscess or fistula [15].

Fistulas involving the colon in patients with Crohn's disease are usually secondary to small bowel disease. However, primary colonic fistulas can also complicate Crohn's disease of the colon, such as a colo-vesical fistula. Preoperative colonoscopy is essential to differentiate patients with primary colonic Crohn's disease from those whose colon is secondarily involved with the small bowel, thus guiding the extent of colonic resection.

For patients with colonic fistula, once other causes of fistula have been excluded, surgical management is indicated.

According to the 2018 Ecco recommendations [16], in cases of perforating CD, surgery should be considered at an early stage. In patients with significant symptoms due to fistulas between diseased loops of bowel and adjacent organs, there is a higher risk of non-response to medical treatment. This risk must be weighed against the additional risk of surgery after prolonged medical treatment. In patients with intra-abdominal abscesses who have had successful percutaneous drainage, several case series favor delayed elective resection.

Severe acute colitis (SAC) can be a complication of colonic Crohn's disease; in up to 30% of patients it is the first manifestation. Medical management should be attempted in patients who do not have evidence of perforation or peritonitis. These efforts should include Correction of the patient's electrolyte and acid-base disorders, transfusion of labile blood products, IV corticosteroid therapy, and close monitoring by the Lieshtiguer score to assess the patient's progress on therapy. The second-line treatment, if corticosteroid therapy fails, is infliximab or cyclosporine.

Patients with hemodynamic instability, or evidence of impending perforation, worsening sepsis or peritonitis should be taken urgently to the operating room for resection. Surgery is also considered in patients who do not respond to medical treatment [17-19].

The risk of colorectal cancer associated with Crohn's disease has increased. However, the magnitude of this risk has been debated. A Swedish population-based study showed a relative risk of 5.6 in patients with colonic CD. This risk appears to increase with the duration of disease progression and in pancolitic forms [20].

In contrast to ulcerative colitis, in which associated cancers tend to be located in the rectum or sigmoid colon, colorectal cancer associated with CD is uniformly distributed. These tumors may appear ulcerated, nodular, plaque-like, or polypoid.

Dysplasia clearly precedes cancer in the setting of inflammatory bowel disease. Therefore, frequent surveillance is imperative in patients.

Conclusion

Crohn's disease with colonic localization is an entity, although uncommon, that can manifest with severe colitis and complicate with fistulas and strictures, especially in patients on 5ASA therapy. Smoking, PABs, and biotherapy treatment are factors associated with colonic stenosis. Thus, the importance of follow-up and adaptation of management to the evolutionary profile of the disease should be emphasized.

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