Clinical case

Crohn’s Disease in a Developing African Mission Hospital: a Rare Case Report

Maladie de Crohn dans un pays en voie de développement: un cas rare
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ABSTRACT

The chronic and lifelong gastrointestinal tract disorder of Crohn’s Disease (CD) is a type of inflammatory bowel disease with unclear causative agent. CD is directly correlated with a triad group of predisposing factors including genetic problems, immune system malfunctions and environmental factors. Though it is uncommon in Africa yet we come across this entity sparingly. The signs and symptoms of CD overlap with many other abdominal disorders like tuberculosis, ulcerative colitis, irritable bowel syndrome etc. It may even involve systems other than GIT. Although it is difficult to make an accurate diagnosis of this disease, many diagnostic armamentaria are available to suggest its presence. Most of the patients are treated conservatively yet a few may require surgical intervention especially presenting with complications like intestinal obstruction, perforations, abscess and fistula formations. We have encountered one such case of intestinal obstruction requiring surgical intervention which was confirmed to be CD histopathologically. Rarity and clinical curiosity of this entity suggest reporting of this case.

INTRODUCTION

Crohn’s disease, also referred to as regional enteritis, granulomatous enterocolitis, and terminal ileitis, is a chronic relapsing and remitting inflammatory disease of unknown cause that is often multifocal and can affect any portion of the gastrointestinal tract [1]. It is generally accepted that the Scottish surgeon Dalziel gave the first account of the disease in 1913 [2]. In the 1960s Lockhart-Mummery and Morson described the involvement of the large intestine by Crohn’s disease [3] and it was in the 1950s that anal and ano-rectal Crohn’s disease were described [4]. In time it became clear that Crohn’s disease can involve any part of the digestive tract and that extra-intestinal manifestations can be present, especially in the skin, eyes and joints [5-9]. The rarity of Crohn’s disease and prevalence of tuberculous enterocolitis in Africa and Asia in general tend to unnecessarily make it hesitate to diagnose a Crohn’s disease both clinically and histologically [9-13]. Its differentiation from ulcerative colitis is always a problem, but the distinction from tuberculosis is rather more difficult in developing countries, if the lesion is granulomatous [9-13]. Surgically resected intestine again required a close examination for various diagnostic criteria to prove a Crohn’s disease [9-13]. We present this case of histological confirmed Crohn’s disease; Rarity and clinical curiosity of this entity suggest reporting of this case.

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CASE REPORT
A 70-year male was admitted to a rural Mission Hospital in Cameroon with a history of crampy right lower quadrant abdominal pain, non-bloody, non-mucoid diarrhea alternating with constipation for the last 5 days. There was anorexia, low grade fever, but no weight loss. Abdominal examination revealed the features of acute intestinal obstruction with an ill-defined mass in the right iliac fossa (RIF) and visible peristalsis. The chest radiograph was essentially normal; Abdomino-pelvic ultrasound scan showed dilated bowel loops and a RIF mass. Abdominal plain radiograph showed multiple air-fluid levels and dilated bowel loops, Barium enema study was suggestive of Caecal tumor and WBC of 40,300 cells/cc. Strongly positive C-reactive protein and Tuberculin test and Gene expert for T.B were both negative. B/P 129/78 mmHg; PR 60b/min; Pyrexia -37.9

C. However, in view of acute intestinal obstruction, exploratory laparotomy was performed after routine investigations and intraoperative finding was a huge complex inflammatory mass involving the caecum, terminal ileum and the sigmoid colon. He subsequently had sigmoidectomy with end to end sigmoido-rectal anastomosis, a caecal resection and the proximal ascending colon exteriorized as end mucoid fistula and terminal ileostomy were performed.

Figure 1: index patient with ileostomy and mucus fistula

Histopathological examination of the resected specimen showed macroscopic appearance of a complex large mass involving caecum and sigmoid colon and terminal ileum; with congested swollen mucosa interspersed with diffused irregular ulcerations making a cobblestone appearance (non-caseating granulomas in all layers of bowel wall from serosa to mucosa); also multiple fissures were present as well as perforation and fistula seen between adjoining bowel loops but no significant inflammatory bowel disease (IBD) in non-ulcerated mucosa.

Figure 2: resected complex mass involving caecum, terminal ileum and sigmoid colon

Microscopically, prominent and enlarged lymphatic follicles, proliferation of muscularis mucosa and formation of fissures extending from mucosa to serosa along with gross edema. Marked infiltrates of inflammatory cells involving all the layers.

Figure 3: gross picture of colonic specimen

Therefore, histopathological diagnosis of Crohn's disease was made. Postoperative period was uneventful. Thereafter, he was referred to the oncology department for adjuvant therapy. He had complete disease remission.
without any complaints during a 9-month follow-up period under proton-pump inhibitors treatment.

**Figure 4: ulcer involving mucosa, submucosa and breaching the muscularis propria**

**DISCUSSION**

Crohn’s disease (CD) causes inflammation of the digestive tract. It can affect any area of the GI tract, from mouth to anus, however it most commonly affects the ileum [14]. In CD, all layers of the intestine may be involved, and normal healthy bowel can be found between sections of diseased bowel. It affects men and women equally in all age groups with predilection in second and third decades with familial preponderance in a few [15]. Once considered rare in the developing world the epidemiology of IBD is changing and the incidence of both CD and ulcerative colitis (UC) is increasing in the Asian Pacific region, India, Eastern Europe and South Africa [16-19]. There have been very few reported cases of Crohn’s disease in black African patients in Kenya, and South Africa [20]. The symptoms, anatomical distribution, signs, and pathology in black patients in Africa and America are similar to that described in whites. The disease is probably underdiagnosed in Africa because of difficulties in distinguishing schistosomiasis and tuberculosis of the bowel [10, 21-23]. The etiology of Crohn’s disease remains completely unknown, although several theories have been issued, such as the involvement of genetic factors, environmental factors (including diet), and infective agents [10-12]. CD is directly correlated with a triad group of predisposing factors including genetic problems, immune system malfunctions and environmental factors. [10-12]

CD usually presents with abdominal pain especially due to involvement of ileum, blood stained diarrhoea and anaemia. Some may have low-grade fever, nausea, and vomiting. Fissures or cracks may be evident, and fistulas and abscesses may form in anal involvement [24]. It may also present with extra-intestinal manifestations like skin or mouth lesions, pain in the joints, eye irritation, kidney stones, gallstones, and other diseases of the hepatobiliary system [25]. Affected children may have delayed milestones. Severe cases of CD may have most common complication like intestinal blockage with thickening and fibrosis of the affected segment [26].

Inspite of the vast diagnostic modalities like ultrasound, barium x-rays, CT scan and colonoscopy, a clear diagnosis of CD remains obscure and no single “gold standard” indicator of this disease has been established [27]. Most patients of CD are usually managed by conservative treatments which include adequate rest, nutritious diet, multivitamins, iron, folic acid, antioxidants, and sulfasalazine. Though surgery is required to relieve obstruction, to repair a perforation, to treat an abscess, or to close a fistula yet a judicious approach to the patient is of utmost importance when to intervene or to continue with conservative management to avoid life threatening complications [2].

The outcome of CD has improved with good medical care. It is serious, but not a terminal illness. Mortality in these patients are due to risks of surgery or associated diseases [28]. These patients require annual follow-up even if they are well and any new symptom should be given due consideration.

**CONCLUSION**

Crohn’s disease is considered by many as a very rare disease in Africa. It is interesting to know that CD which affects mainly young adults may debut at any age. The symptoms of CD may mimic many other abdominal conditions for which medical attention is required. However, it should be kept in back of mind as one of the causes of acute abdomen especially in those patients who have a long history of intestinal pathologies whose treatments greatly differ.

Establishing an appropriate treatment in order to avoid short and long term complications, which may be life-threatening to the patient, depends mainly on distinguishing between other inflammatory disorders of the digestive tract and Crohn’s disease. A histopathologically confirmed diagnosis becomes greatly necessary also because of the increased risk of adenocarcinoma in patients with Crohn’s disease.

**REFERENCES**


