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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.

RÉSUMÉ

Le trouble de l'appareil gastro-intestinal chronique et persistant de la maladie de Crohn (MC) est un type de maladie inflammatoire de l'intestin sans cause évidente. La MC est directement corrélée à une triade de facteurs prédisposants, notamment des problèmes génétiques, des dysfonctionnements du système immunitaire et des facteurs environnementaux. Les signes et les symptômes de la MC se chevauchent avec de nombreux autres troubles abdominaux tels que la tuberculose, la colite ulcéreuse, le syndrome du côlon irritable, etc. Ils peuvent même concerner des systèmes autres que le système digestif. Bien qu'il soit difficile de poser un diagnostic précis de cette maladie, de nombreux signes peuvent la suggérer. La plupart des patients sont traités de façon conservatrice, mais quelques-uns peuvent nécessiter une intervention chirurgicale, en particulier lors des complications telles qu'une obstruction intestinale, des perforations, un abcès et des fistules. Nous avons rencontré un cas d'obstruction intestinale nécessitant une intervention chirurgicale confirmée histopathologiquement comme une MC. La rareté et la curiosité clinique de cette entité suggèrent de signaler ce cas.

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 anorectal 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 difficulty 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.

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 ^{0} 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.

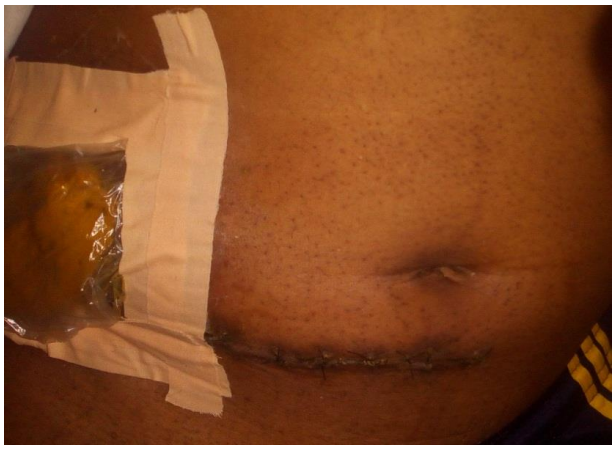

Figure 1: index patient with ileostomy and mucus fistula

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 adjourning bowel loops but no significant inflammatory bowel disease (IBD) in non-ulcerated mucosa.

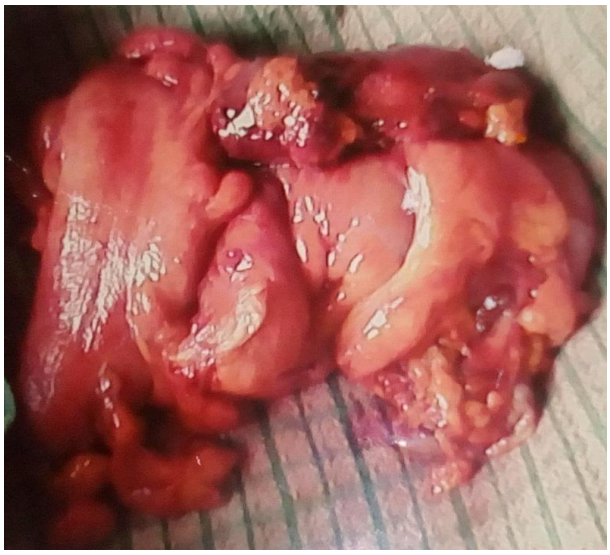

Figure 2: resected complex mass involving caecum, terminal ileum and sigmoid colon

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.

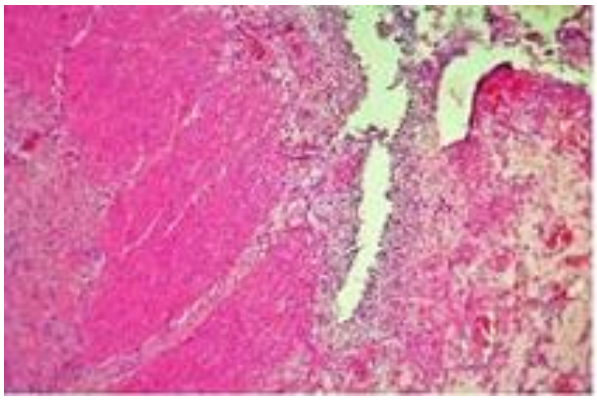

Figure 4: ulcer involving mucosa, submucosa and breaching the muscularis propria

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

1. Iacobuzio-Donahue, C.A. & Montgomery, E.A. (2012). Idiopathic inflammatory bowel disease. In J.R. Goldblum (series editor), Gastrointestinal and Liver Pathology. USA: Elsevier Saunders
2. Dalziel, T.K. Chronic interstitial enteritis. Br Med J, 1913; ii: 1068
3. Lockhart-Mummery, H.E. & Morson, B.C. Crohn's disease (regional enteritis) of the large intestine and its distinction from ulcerative colitis. Gut. 1960;1: 87
4. Morson, B.C. & Lockhart-Mummery, H.E. Anal lesions in Crohn's disease. Lancet 1959; ii:1122
5. Fielding, J.F., Toye, D.K., Beton, D.K. & Cooke, W.T. Crohn's disease of the stomach and duodenum. Gut. 1970;11:1001
6. Basu, M.K., Asquith, P., Thompson, R.A. & Cooke, W.T. Proceedings: Oral lesions in patients with Crohn's disease. Gut. 1974; 15: 346
7. Huchzermeyer, H., Paul, F., Seifert, E., Frohlich, H. & Rasmussen, C.W. Endoscopic results in five patients with Crohn's disease of the esophagus. Endoscopy 1977; 8: 75

8. Rankin, G.B., Watts, H.D., Melnyk, C.S. & Kelley, M.L. Jr. National Cooperative Crohn's Disease Study: extraintestinal manifestations of perianal complications. Gastroenterology 1979; 77: 914
9. Greenstein, A.J., Sachar, D.B., Smith, H., Janowitz, H.D. & Aufses, A.H. Jr. Patterns of neoplasia in Crohn's disease and ulcerative colitis. Cancer 1980; 46:403
10. Cho K.J, Suh Y.L, Kim CW, Chi J.G Journal of Korean Medical Sciences 1987; 2(2): 133-136
11. Logan I. Bowlus CL. The geoepidemiology of autoimmune intestinal disease. Autoimmune Rev. 2013: 9(5): A372-A378
12. Cosnes J, Gower–Rousseau C, Seksik P, Cortot A. Epidemiology and natural history of inflammatory bowel diseases. Gastroenterology 2011:140:1785-1794
13. Economou M, Zambeli E, Michopoulos S. Incidence and prevalence of Crohn's disease and its etiological influence. Annals of gastroenterology 2009:22(3): 58-67
14. Hanauer SB, Sandborn W. Management of Crohn's Disease in Adults. The Am J Gastroenterol. 2001; 96(3):635–643.
15. Sathiyasekaran M, Shivbalan S. Crohn's Disease. Indian J Pediatr. 2006; 73(8):723–729. [PubMed: 16936369]
16. Ouyang Q, Tandon R, Goh K-L,et al.The emergence of inflammatory bowel disease in the Asian Pacific region. Curr Opin Gastroenterol 2005; 21:408–13.
17. Wright JP, Froggatt J, O'Keefe EA, et al. The epidemiology of inflammatory bowel disease in Cape Town 1980–1984.S Afr Med J1996; 70: 10–5.
18. Lakatos PL. Recent trends in the epidemiology of inflammatory bowel disease: up or down. World J Gastroenterol 2006; 14: 6102–8.
19. Epstein D, Watermeyer G, Kirsch R. Review article: the diagnosis and management of Crohn's disease in populations with high-risk rates for tuberculosis Aliment Pharmacol Ther25, 1373–1388
20. Steury EM, Templeton AC. Crohn's disease in Africa. A case report and review Trop Geogr Med. 1980 Jun; 32(2):172-3
21. Nguyen, G.C., Torres, E.A., Regueiro, M. et al. Inflammatory bowel disease characteristics among African-Americans, Hispanics, and Non-Hispanic Whites: characterization of a large North American cohort. Am J Gastroenterol. 2006; 101: 1012–1023
22. Mulhall AM, Gholson RD, Eichenberger MR, Galandiuk S. Inflammatory bowel disease and African Americans: a systematic review. Inflamm Bowel Dis 2008 Jul; 14(7):960-967.
23. Behzadi P, Behzadi E, Ranjbar R. The Incidence and Prevalence of Crohn's Disease in Global Scale. SOJ Immunology 2015; 3(2): 1-6
24. Platell C, Mackay J, Collopy B, et al. Anal pathology in patients with Crohn's disease. Aust N Z J Surg. 1996; 66:5–9. [PubMed: 8629983]
25. Thompson NP, Wakefield AJ, Pounder RE. Prognosis and prognostic factors in inflammatory bowel disease. The Saudi J Gastroentrol. 1995; 1(3):129–137.
26. Freeman HJ. Use of the Crohn's disease activity index in clinical trials of biological agents. World J Gastroenterol. 2008; 14(26):4127–4130. [PMCID: PMC2725371] [PubMed: 18636655]
27. Stange EF, Travis SP, Vermeire S, et al. European evidence based consensus on the diagnosis and management of Crohn's disease: definitions and diagnosis. Gut. 2006; 55:1–15. [PMCID: PMC1859998] [PubMed: 16481628]
28. Katsanos KH, Tsianos VE, Maliouki M, et al. Obstruction and pseudo-obstruction in inflammatory bowel disease ; 23(4): 243-256. Ann gastroenterol. 2010; 23(4):243–256.