Case Report

Relapsing severe Crohn's colitis and perianal fistula on Infliximab maintenance therapy

Abhraneel Guha[1], Kundan Chaurasia[2], Harsh Deepak Singh[3], Mandeep Joshi[4], B.B.Pal[5]

From, [1,4]PGT, [2]Head of Unit, Department of General Medicine, [3]PGT, [5]Head of Unit, Department of Gastroenterology, Peerless Hospital and B. K. Roy Research Center, Kolkata, West Bengal, India.

Correspondence to: Dr. B. B. Pal, Department of General Medicine, Peerless hospital and B. K. Roy research center, Kolkata, West Bengal. India. Email: dr.bhaskarbikashpal@gmail.com

Received – 01 July 2019 Initial Review – 01 July 2019 Accepted – 07 August 2019

ABSTRACT

Background: Perianal fistula occur in up to 43% of patients with Crohn's disease. In Crohn's disease it is important to identify the site of inflammation, area involved and based on that the treatment regimen is decided. Perianal abscesses must be drained and perianal fistulas must be treated with surgical and medical management. In this case report we would discuss about a patient who underwent failure with first line treatment and developed fistula. His symptoms decreased with due course of management and was advised for surgical procedure along with medical management.

Key words: *Adalimumab, Crohn's disease, infliximab, perianal fistula, relapsing Crohn's*

Inflammatory bowel disease is an immune mediated chronic intestinal condition. Crohn's disease can affect anywhere from mouth to anus. There is an alteration in the supraorganism (microbiota, intestinal epithelial cells and immune cells) by environmental and genetic factors. Chronic diarrhoea, fatigue, weight loss, abdominal pain, enterovesical fistulas, enterocutaneous fistulas are the most common features. Along with anemia, dyselectrolytemia and coagulopathy. Apthoid ulceration and focal crypt abscesses with loose aggregation of macrophages are appreciated microscopically in patients who have Crohn's disease.

It involves ileo-colon, jejunum and may also present as perianal disease. Infections like Helicobacter-pylori, Cytomegalovirus, and Clostridium difficile are common. Patients are treated based on whether they are mild to moderate, moderate to severe fistulizing crohn's disease. Mild to moderate are normally managed with budesonide, sulfasalazine (colon), predisone, 6MP, Infliximab, adalimumab or vedolizumab. Moderate to severe cases are managed with 6MP+Inliximab, Ustekinumab, Vedolizumab, Glucorticoid i.v. Whereas Fistulizing cases are managed with drainage of abscess and antibiotics, Total parenteral nutrition, 6MP/ Azathioprine/ methotrexate+Infliximab/ adalimumab/ cetrolizumab pegol.

CASE REPORT

21 years old patient with a background of Crohn's disease came with chief complaint of loose stool and fever since one month. Patient was apparently alright one month before when he started having stool which was watery in consistency and associated with abdominal pain and fever. Fever was of mild to moderate grade. He was having faecal incontinence since one week. This patient previously had perianal involvement of Crohn's disease, for which he underwent fistulotomy few years back. He was also known to have thiopurine S- methyltransferase activity (TPMT) wild type and was on Infliximab before he came with the above complaints. An Inteferon gamma release assay test for tuberculosis which was done in April

2018 was negative.

On admission after clinical examination it was found his temperature was 99.2F, BP-110/70mm/Hg, Pulse-108, His abdomen was tense. Guarding and rigidity were noted. Bowel sound were heard more frequently. All routine investigations were done which revealed haemoglobin-10.4, CRP-45.9, stool routine examination showed occult blood, 12-14 pus cells/HPF, fecal calprotectin->3000, urine C/S, Stool C/S, Cytomegalo virus IgM and Clostridium difficile were negative. He was started on empirical antibiotics i.v. piperacillin/ tazobactam and i.v.metronidazole. Initially a daily fever spike of 99.2F to 100.4F was noted. CDAI (Crohn's diasease activity index) was 478. Colonoscopy was performed [Figure 1], it revealed deep punched out ulcers intervening mucosa in rectum, sigmoid colon, distal colon and ileocaecal involvement with narrowing and ulceration of ileocaecal valve plus terminal ileal ulcers, large fistula in perianal area was seen.

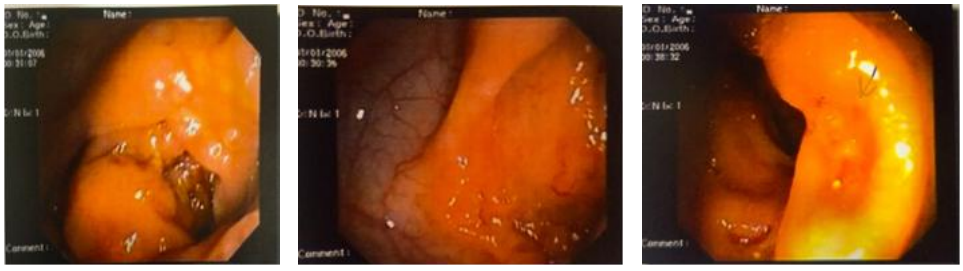

Figure 1a: Terminal ileus, Figure 1b: Ileocaecal valve, Figure 1c: Rectal and sigmoidal ulcers (pointed by the arrow),

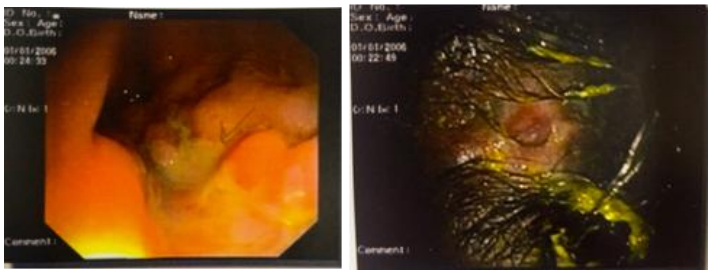

Figure 1d: Rectal ulcers (pointed by arrow) **Figure 1e: Large perianal fistula**

CECT enterography was done [Figure 2] which revealed extensive involvement of colon and distal ileum with concentric wall thickening and mural stratification suggestive of Crohn's disease, mesenteric lymph nodes were also noted. Gradually his stool consistency changed from watery to semisolid, pain in abdomen decreased considerably and abdomen became soft. Repeat investigation revealed TLC-7200, CRP-31.4, ESR-75. He was planned to be started on Adalimumab and undergo seton procedure for perianal fistula. He was discharged in hemodynamically stable condition.

DISCUSSION

Crohn's disease typically involves small intestine, ileo caecal part is involved commonly. Its disease is a relapsing systemic inflammatory disease, mainly affecting the gastrointestinal tract with extraintestinal manifestations and associated immune disorders. It was found that there is great variability in the concentrations of calprotectin in stool samples collected during a single day. As the levels of calprotectin increased with longer time between the bowel movements, it seems most appropriate to analyse stool from the first bowel movement in the morning. Moreover, storage of stool samples at room temperature for more than 3 days is not advisable [2].

Dietary therapy involving partial enteral nutrition with an exclusion diet seems to lead to high remission rates in early mild-to-moderate luminal Crohn's disease in children and young adults [3]. Low vitamin D levels are associated with disease activity in CD and increase after infliximab treatment [4]. Anal fistula plug in patients with

Crohn's disease is a safe procedure with reasonable success, little morbidity and a low risk of incontinence. Ideal surgical treatment for anal fistula should aim to eradicate sepsis and promote healing of the tract, whilst preserving the sphincters and the mechanism of continence. The anal fistula plug, derived from porcine small intestinal submucosa, is safe but modestly effective in long-term follow-up, with success rates varying from 24%-88% [1].

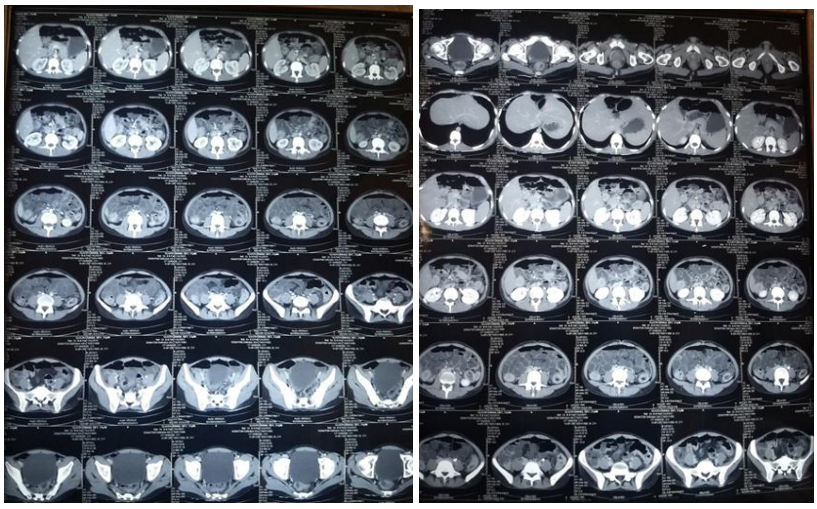

Figure 2a, 2b: Images of CECT abdomen

Studies have shown that higher maintenance infliximab trough concentrations are associated with more favourable rates of biochemical, endoscopic, or histologic remission in Crohn's disease patients and that infliximab concentrations may differ based on the treatment goal [5]. The significant role of microorganisms in the pathogenesis of inflammatory bowel disease seems apparent, although it is complex. Whether it is one pathogenic germ or more than one in unison with the gut microbiota as helper, main character or observer needs to be elucidated. In Crohn's disease, we see an inappropriate response of the innate and/or adaptive immune system to the intestinal microbiota in genetically predisposed individuals. The diagnosis of Crohn's disease is based mainly on patient's history and clinical findings and supported by serologic, radiologic, endoscopic, and histologic findings. Infliximab is not superior to placebo in preventing clinical recurrence after Crohn's disease-related resection. However, infliximab does reduce endoscopic recurrence [6,7].

In study of Yarur et al it was found that, the ADA level that was best associated with histologic healing was 7.8 µg/mL, whereas the ADA level that was best associated with endoscopic healing was 7.5 µg/mL [8]. Detection of Cytomegalovirus genome or antigen in the intestine was commonly associated with Inflammatory Bowel disease [9]. Our patient was started on Infliximab and planned for seaton procedure and called for follow up after 1 month.

CONCLUSION

Patients are treated based on whether they are mild to moderate, moderate to severe fistulizing crohn's disease. Mild to moderate are normally managed with budesonide, sulfasalazine, predisone, 6MP, Infliximab, adalimumab or vedolizumab. Moderate to severe cases are managed with 6MP+Inliximab, Ustekinumab, Vedolizumab, Glucorticoid i.v. Whereas Fistulizing cases are managed with drainage of abscess and antibiotics. Total parenteral nutrition, 6MP/ Azathioprine/methotrexate+Infliximab/adalimumab/ cetrolizumab pegol. Patients can have various complications like fistula, infection. On some cases it is essential to rule out tuberculosis. This patient was treated accordingly and will be on follow up.

REFERENCES

1. Nasseri Y, Cassella L, Berns M, et al. The anal fistula plug in Crohn's disease patients with fistula- in- ano: a systematic review. Colorectal Disease. 2016 Apr;18(4):351-6.

2. Lasson A, Stotzer PO, Öhman L, et al. The intra-individual variability of faecal calprotectin: a prospective study in patients with active ulcerative colitis. Journal of Crohn's and Colitis. 2014 Dec 18;9(1):26-32.
3. Sigall-Boneh R, Pfeffer-Gik T, Segal I, et al. Partial enteral nutrition with a Crohn's disease exclusion diet is effective for induction of remission in children and young adults with Crohn's disease. Inflammatory bowel diseases. 2014 Jun 30;20(8):1353-60.
4. Ham M, Longhi MS, Lahiff C, et al. Vitamin D levels in adults with Crohn's disease are responsive to disease activity and treatment. Inflammatory bowel diseases. 2014 Mar 27;20(5):856-60.
5. Papamichael K, Rakowsky S, Rivera C, et al. Association between serum infliximab trough concentrations during maintenance therapy and biochemical, endoscopic, and histologic remission in Crohn's disease. Inflammatory bowel diseases. 2018 Apr 28;24(10):2266-71.
6. Laass MW, Roggenbuck D, Conrad K. Diagnosis and classification of Crohn's disease. Autoimmunity reviews. 2014 Apr 1;13(4-5):467-71.
7. Regueiro M, Feagan BG, Zou B, et al. Infliximab reduces endoscopic, but not clinical, recurrence of Crohn's disease after ileocolonic resection. Gastroenterology. 2016 Jun 1;150(7):1568-78.
8. Yarur AJ, Jain A, Hauenstein SI, et al. Higher adalimumab levels are associated with histologic and endoscopic remission in patients with Crohn's disease and ulcerative colitis. Inflammatory bowel diseases. 2016 Jan 11;22(2):409-15.
9. Dimitroulia E, Spanakis N, Konstantinidou AE, et al. Frequent detection of cytomegalovirus in the intestine of patients with inflammatory bowel disease. Inflammatory bowel diseases. 2006 Sep 1;12(9):879-84.

Funding: None; Conflict of Interest: None Stated.

How to cite this article: Guha A, Chaurasia K, Singh HD, Joshi M, Pal BB. Relapsing severe Crohn's colitis and perianal fistula on Infliximab maintenance therapy. Eastern J Med Sci. 2019;4(4):169-172.

DOI: 10.32677/EJMS.2019.v04.i04.006