CASE THREE

Short case number: 3_8_3
Category: Gastrointestinal & Hepatobiliary Systems
Discipline: Surgery
Setting: General Practice
Topic: Ulcerative colitis and Crohns disease

Case

Ahmed Ma, aged 21 years, presents with acute bloody watery diarrhoea that contains pus & mucus. She advises that she has had recurrent episodes over the previous 6 months and has lost 5 kg in this time. The episodes are painful and sometimes she feels sweaty & unwell.

Questions

1. What further history & examination would you undertake in this case?
2. What investigations would you order?
3. Endoscopic biopsy diagnoses ulcerative colitis. In a table, summarise the differences between ulcerative colitis and Crohns disease in terms of
   a) symptoms & signs, b) pattern of development, c) gross & microscopic appearance, d) radiologic imaging findings, e) course of illness & f) response to medical/surgical treatment.
4. What are the "medical therapy" options in Ulcerative colitis & Crohns Disease
5. What are the "surgical therapy" options in Ulcerative colitis & Crohns Disease

Suggested reading:

1. Henry MM, Thompson JN, editors. Clinical Surgery. 3rd edition. Edinburgh: Saunders; 2012. Chapter 24.
2. Garden OJ, Bradbury AW, Forsythe JLR, Parks RW, editors. Davidson's Principles and Practice of Surgery. 6th edition. Philadelphia: Churchill Livingstone Elsevier; 2012. Chapter 16.

ANSWERS

1. **What further history & examination would you undertake in this case?**
   - routine GIT history
   - GIT examination
   - Look for (uncommon) extra intestinal manifestations of IBD: ocular (conjunctivitis, iritis, uveitis, iridocyclitis, episcleritis) skin (pyoderma, gangrenosum, erythema nodosum multiforme) joint (ankylosing spondylitis, hypertrophic osteoarthropathy. arthritities) biliary manisfestations (sclerosing cholangitis, pericholangitis, granulomatous hepatitis) as well as vasculitis and aphthous stomatitis

2. **Investigations**
   - CT with oral contrast is helpful for small bowel disease, as well as colonic disease in sick patient
   - Colonoscopy with biopsy diagnoses ulcerative colitis as well as Crohn's colitis/ileitis
   - there are no laboratory studies specific for the diagnosis of Crohn's disease

3. **Differences between Ulcerative Colitis and Crohns disease**

	Ulcerative Colitis	Crohn's Disease
symptoms & signs		
diarrhoea	both UC and Crohns	both UC and Crohns
perianal fistulas	rare	common
strictures or obstruction	uncommon	common
perforation	both UC and crohns	both UC and Crohns
pattern of development		
rectum	always involved	often normal
terminal ileum	normal	diseased in majority of patients
distribution	continuous	segmented, skip lesions
megacolon	can occur	less common
appearance		
gross	friable, bleeding granular exudates, pseudo-polyps, isolated ulcers	linear ulcers, transverse fissures, cobble-stoning, thickening, strictures,
microscopic	inflamed submucosa & mucosa, crypt abscesses; fibrosis uncommon	transmural inflammation, granulomas, fibrosis
radiologic	lead-pipe, foreshortening, continuous, concentric	string sign in small bowel; segmental, asymmetry internal fistulae
course		
natural history (variable)	exacerbations, remissions, dramatic flare-ups	exacerbations, remissions, chronic, indolent
medical treatment	initial response high (> 80%)	response less predictable
surgical treatment	curative	useful for complications
recurrence	no	common
Risk of Malignancy	Approx 10 % per decade after onset of symptoms. Recommend commencing surveillance at 10 years since onset of symptoms.	

4. **What are the "medical therapy" options in Ulcerative colitis & Crohn's Disease?**

Medical therapy is usually the initial treatment. It is successful in approximately 80% of cases. In mild disease, the treatment is primarily symptomatic, with the use of antidiarrhoeal agents that slow gut transit (e.g., loperamide) and bulking agents (psyllium seed products) that result in semiformed, less watery stools. In moderate disease, sulfasalazine or mesalamine-based preparations should be tried because they induce remission in approximately half of all patients initially. In severe disease, most patients respond dramatically to steroid administration. Unfortunately, because of severe side effects, the dose is tapered and minimised whenever possible. Azathioprine and related compounds are useful, but take some time to work; usually introduced when there would be ongoing need for steroids. Anti-tumour necrosis factor (anti-TNF) monoclonal antibody may be used in treating patients with Crohn's disease, especially in the presence of fistulae. While this treatment is more effective in patients with Crohn's disease of the small bowel, patients with primary colonic involvement also have significant response rates. . Supportive therapy, including physical and emotional support, is important.

Major complications are toxic megacolon, colonic perforation, massive haemorrhage, serious anorectal complications, and carcinoma development after years of disease. Initial therapy for toxic megacolon is aggressive medical care, including gastric decompression, antibiotics, intravenous administration of fluid and electrolyte, hyperalimentation, and elimination of all other medications, specifically anticholinergics under close observation

5. What are the "surgical therapy" options in Ulcerative colitis & Crohn's Disease

Surgical therapy is indicated when medical therapy fails or surgically treatable complications ensue (e.g., haemorrhage, perforation, obstruction, carcinoma). Because of the increased risk of carcinoma, long-standing ulcerative colitis is also an indication for surgical intervention. The definitive operative procedure for ulcerative colitis is total proctocolectomy with permanent ileostomy or ileal-anal pouch anastomosis.Depending on patient circumstance, a variation of this procedure is still used today, with often staged procedures taking place.

Total proctocolectomy with ileoanal pouch pull-through (Fig. 16-19A-D) is now the operation of choice. The procedure is performed with a surgically constructed ileal reservoir, thereby sparing the patient a permanent abdominal ileostomy. A recent variation of this procedure removes the colon and all but 1cm of the rectum. The remaining rectal stump receives a stapled anastomosis. There is, however, significant concern that this operation does not represent a cure because diseased mucosa is left behind, raising the possibility of subsequent development of cancer in the retained rectal stump. Both J-stapled and W-handsewn pouches can be fashioned, with the lower aspect of the pouch stapled to the upper anal canal. Generally done by specialist colorectal surgeons.

"One-stage": The advantage of the stapled operation is that very often it can be done without a diverting ileostomy, if the patient is reasonably well: commonly a patient having a planned elective operation.

"Two-stage": Because patients with toxic megacolon, perforation, or other complications have much higher morbidity and mortality rates, early surgery may be indicated. If so, then a total colectomy, end ileostomy and rectal stump/mucous fistula is generally done. The patient returns for the pouch operation in 3-6 months.