Faecal Impaction Presenting as Acute Appendicitis: A Report of 2 Cases

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ABSTRACT

This paper highlights different manner in which faecal impaction presents i.e. with acute severe right lower quadrant abdominal pain. Two illustrative cases of young adult males are presented, they had clinical features suggestive of acute appendicitis, which turned out to be due to faecal impaction. Digital rectal examination and plain abdominal x-rays were helpful in the diagnosis of faecal impaction. The simple treatment of soap and water enema with oral liquid paraffin ensured that unnecessary appendicectomies were avoided. Interestingly one of the patients developed an acute appendicitis 5 months after his initial presentation when he had recurrent faecal impaction. He had an appendicectomy performed. A cause and effect relationship between faecal impaction and acute appendicitis is also discussed briefly.

KEY WORDS: Right Lower Quadrant Pain, Appendicitis, Faecal Impaction

Introduction

Faecal impaction is the arrest and accumulation of faeces in the rectum or colon. [1] This entity is commonly encountered in incapacitated or institutionalised elderly people, however it can occur in any age group. [2] Impaction may give rise to symptoms in many organ systems but the typical symptoms have consistently been anorexia, nausea, vomiting and abdominal pain, [2] symptoms that are also seen in acute appendicitis. The commonest cause of acute right lower quadrant pain in young adults is acute appendicitis. [3] This is a report of another cause of acute right lower quadrant pain in young adults.

Case Reports

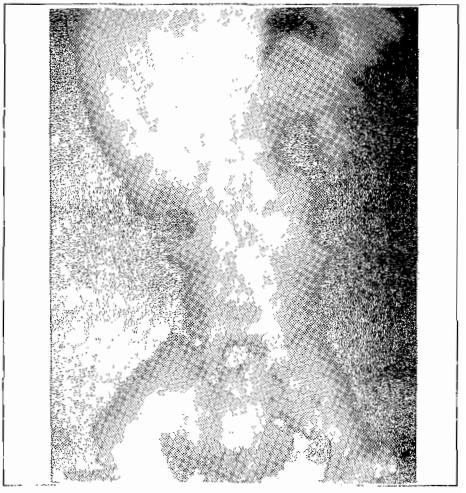
Case 1: A 21 year-old man presented with a 4-hour history of colicky periumbilical pain. There was no fever, no anorexia, nausea or vomiting. His last bowel motion was 3 days prior to presentation. There was no history of a similar episode in the past. Past medical history revealed two previous operations; bilateral varicocelectomies for symptomatic varicoceles 2 years previously and bilateral orchidopexies for torsion of the left testis 4 years previously. Physical examination showed no fever (36.8°C), pallor or dehydration. Pulse rate was 76/minute. and blood pressure 110/80mmHg. Chest examination was normal. The abdomen was slightly distended and moved with respiration. Healed varicocelectomy scars were noted bilaterally in the inguinal regions. The abdomen was soft, there was periumbilical tenderness, worse over Mcburneys point but no rebound tenderness. No masses were felt and bowel sounds were normal. Rectal examination revealed a normal anal sphincteric tone but the rectum was loaded with hard craggy faeces. There was tenderness in the rectovesical pouch but no bogginess; formed brown stool stained the gloved finger. Management consisted of nil by mouth, nasogastric tube decompression, intravenous fluids, intravenous ampiclox and metronidazole. Haematocrit was 42%, sodium 42meq/l, potassium 4.1 meq/l, chloride 100 meq/l, bicarbonate 2[illegible] meq/l and urea 28 mg%. Plain abdominal x-rays showed dilated large bowel loops with heavy faecal mottling extending from the rectum to the hepatic flexure of the ascending colon (Figure 1). This prompted the administration of a warm enema saponis. The patient passed a large quantity of firm faeces and abdominal pain subsided. Abdominal examination one hour after this showed no areas of tenderness. Antibiotics were discontinued after the initial dose. He was commenced on graded oral fluids and was discharged 2 days after admission on liquid paraffin and dulcolax tablets to be taken for 1 week.

He was symptom-free for about 5 months when he represented with features similar to his earlier presentation. The main findings at this time were vague, firm, tender and mobile indentable masses palpable in the right and left paraumbilical regions. Bowel sounds were normal. Rectal examination showed perianal soiling with brown faeces and the rectum was laden with hard and soft faeces. The diagnosis was recurrent fecal impaction. Plain abdominal x-rays showed heavy fecal shadowing from ascending colon to rectum. There was no hesitation in ordering a warm enema saponis which was

effective; abdominal pain subsided and he was comfortable, however there was persistent right iliac fossa tenderness maximal over Mcburney's point and Rovsing's sign was positive. The diagnosis of acute appendicitis could not be excluded. An emergency appendicectomy was done and operative findings were a turgid inflamed appendix with palpable faecoliths within the lumen. Histopathological report of the appendix specimen confirmed appendicitis. Post-operative course was uneventful and he was discharged home. He has remained symptom free 9 years later.

Figure 1: Plain Abdominal Radiograph of Case 1, Showing Dilated Large Bowel and Faecal Opacities

Figure 2: Plain Abdominal Radiograph Of Case 2, Showing Calcified Faeces



Case 2: A 22 year-old man presented with a 2 day history of severe colicky abdominal pain at the periumbilical region. It was non radiating and associated with vomiting after eating. His last bowel motion was 2 days prior to presentation, and was liquid brown stool. He had a similar episode 4 months earlier, which was managed at a peripheral hospital [details of the treatment were unknown]. On examination he looked ill, was not pale, not jaundiced and the tongue was dry and coated. Temperature was 37°C, pulse rate 78/minute and blood pressure 100/70 mmHg. The abdomen was full, moved with respiration, was soft and there was generalised tenderness worse in the right iliac fossa. There was guarding and equivocal rebound tenderness. There were

no palpable masses. Bowel sounds were hypoactive. Rectal examination revealed a rectum loaded with hard faeces with tenderness to the right side of the rectovesical pouch. Initial management was nil by mouth, nasogastric tube decompression and intravenous fluids. Plain abdominal x-rays showed heavy fecal mottling with areas of calcification from rectum to caecum (Figure 2). The diagnosis of fecal impaction was made. He was placed on oral liquid paraffin, 30 mls statim, then 4 hourly for 24 hours and a warm enema saponis was given. This resulted in evacuation of a large amount of hard faeces with resolution of abdominal pain and tenderness. A post-evacuation plain abdominal x-ray showed disappe-arance of the fecal opacities with normal bowel gas appearance. The patient was started on graded oral fluids and discharged 3 days later on oral liquid paraffin. He has remained symptom-free 9 years after.

Discussion

Fecal impaction, which is usually seen in the elderly and bedridden, is a known cause of chronic intestinal obstruction with constipation, abdominal distension with or without colicky abdominal pain and vomiting. [4] However, impactions can occur in any age group. [2] The most common presenting symptoms are paradoxical diarrhoea and incontinence which are also known as spurious diarrhoea and overflow incontinence respectively .[1,2,4,5] This incontinence is often explained by the large faecal mass causing reflex relaxation and/or stretching of the anal sphincters thus allowing liquid stool to pass around the impaction [4,5] or a reflex reduction in internal sphincter tone by rectal distension. [5] Impaired anorectal sensation is an additional cause, which prevents conscious contraction of the external sphincter when the internal sphincter is relaxed. [5]

The more common causes of impaction include lack of mobility, as in the elderly and bedridden, depression and psychosis, neglecting the urge to defecate as in the demented elderly, habitual postponement of defecation in children, painful anorectal lesions such as anal fissures, haemorrhoids and fistulae and in patients with spinal cord injuries. [2] Idiopathic megacolon (lazy colon), which may be found in children and young adults 4,6, could be caused by postponement of defecation for any reason. Although typical symptoms of impaction such as anorexia, nausea, vomiting and abdominal pain may be present, other symptoms in a number of organ systems have been reported including massive rectal bleeding from stercoral ulceration, [7] hydronephrosis [8] and mimicking colonic tumours as faecaloma.[9]

Thus, awareness of this condition is important in order to initiate prompt treatment and prevent the complications, which may follow prolonged unrelieved impaction.

A digital rectal examination is critical and a plain abdominal x-ray will confirm the diagnosis by revealing the masses of faeces with their typical bubbly or speckled appearance. [2] Faecal impaction may mimic acute appendicitis as in the present report. Indeed, one of the earliest papers written on fecal impaction had alluded to the presentation of abdominal pain, constipation, vomiting with or without diarrhoea as being similar to appendicitis or acute urinary obstruction in that prompt treatment should be arranged to prevent complications. [10] Both patients in the present report had colicky abdominal pain, which was worse in the right lower quadrant of the abdomen. This is explained by the fact that wherever the site of an obstruction is in the large intestine, the caecum bears the brunt by virtue of its distensibility. [2,11] Also the presence of inspissated faeces within the appendiceal lumen could be responsible for the pain and tenderness. [12] Indeed fecal impaction may lead to the development of acute appendicitis. [14 - 17] The first patent represented with a recurrent fecal impaction 5 months later with acute appendicitis. Increased intracolonic pressures, obstruction of the appendiceal lumen and increased bacterial count on the appendix may lead to injury and consequent inflammation of the appendix if sustained for 6 – 18 hours. [14 - 17]

Investigative modalities for patients with disordered defecation should include anorectal manometry, evacuation proctography (cinedefaecography), electromyography and colonic transit studies using radioopaque markers. [5,18,19] These are usually performed after the conventional evaluation with barium enema or colonoscopy. Barium enema was available in our centre but could not be done in the patients.

The best treatment of fecal impaction is prevention; adequate dietary fibre, increased exercise, increased fluid intake, changes in environment or medication and making bathroom facilities conducive to defaecation. [2,18]. Established impaction is treated with enemas, laxatives, and stool softeners. If these do not move the mass, manual fragmentation and evacuation of the faecal mass is done, usually under liberal lubrication with xylocaine gel. [12,18] When an impaction is beyond the reach of the finger, a lavage directed by sigmoidoscopic visualisation can be effective. [2] Whole-gut irrigation with 2 litres per day of an isoosmotic solution of nonabsorbable polyethylene glycol (Golytely) has been successful in non-emergency cases. [2,18] Surgery is indicated in selected cases, in refractory cases

or when there is a life-threatening complication such as bleeding. [2,18,19]

The first patient in this report was a university student, without accommodation and had to postpone defaecation due to unattractive toilet facilities. A study in a western Nigerian university showed that 17% of students occasionally postpone defaecation due to dirtiness of toilets, absent toilet facilities or being too busy at the time. [20] The second patient was an apprentice printer and may have had the same set of factors playing a role.

Faecal impaction may give rise to symptoms similar to acute appendicitis. Awareness and a high index of suspicion are necessary to make a diagnosis. While managing faecal impaction nonoperatively, arrangements for emergency appendicectomy must be in place as acute appendicitis may be a complication.

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