Crohn's disease and enterovesical fistulae: common things are common

Introduction

Enterovesical fistulae can form between any segment of bowel in the pelvis (e.g. colon, ileum) and the bladder or ureter. They are most commonly associated with colonic diverticula (50–70%), cancer, Crohn's disease, radiotherapy and trauma (Kovalcik et al, 1976; Pollard et al, 1987).

Figure 1. Abdominal computed tomography radiograph, showing a thickened anterior bladder wall associated with bubble of gas in the bladder (arrowed).

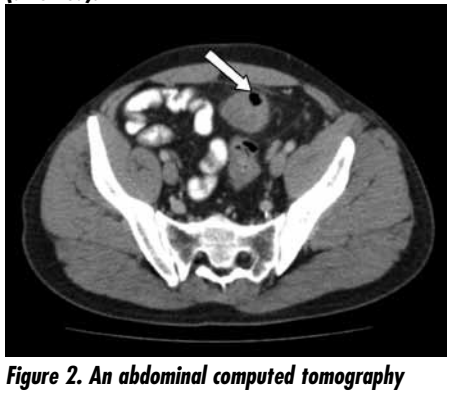

Figure 2. An abdominal computed tomography radiograph, showing a loop of sigmoid colon adherent to the anterior abdominal wall, with fluid in the left rectus sheath.

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They frequently present with recurrent urinary tract infections, faecaluria, pneumaturia and haematuria; sepsis or gastrointestinal symptoms are rare (unless associated with Crohn's disease). Pneumaturia and faecaluria occur in approximately 80–90% of cases (Pollard et al, 1987; Garcea et al, 2006).

Gouverneur's syndrome, which describes suprapubic pain, frequency, dysuria and tenesmus, is related to enterovesical fistula. Cystoscopy is the best investigation to detect a fistula, although a barium enema has been shown to be useful (Garcea et al, 2006). Typically computed tomography scans are helpful in detecting malignancy as a cause of fistula formation, however, this case shows that they may also provide clear imaging of a fistula track.

Discussion

Crohn's disease can be difficult to diagnose, and in the presence of positive family history and supportive radiology it may be appropriate to trial a course of treatment. British gastroenterology guidelines encourage attempts to gain histopathological evidence with the presence of granulomatous inflammation confirming a diagnosis of Crohn's disease (Carter et al, 2004). In this case, the absence of diar-

Case Report

A 39-year-old Caucasian male presented with a 5-day history of acute severe left iliac fossa pain (radiating to the umbilicus), vomiting and episodic pneumaturia associated with brown urinary sediment. There had been no reported alteration in bowel habit, anorexia or weight loss. On examination he was apyrexial and haemodynamically stable with only mild tenderness limited to the area of the left lower rectus sheath, inferior to the umbilicus. Four years earlier he had been diagnosed with Crohn's disease at a nearby hospital, following a similar episode of left iliac fossa pain; the diagnosis of Crohn's disease was based on computed tomography findings of a thickened ascending colon despite normal histology at colonoscopy. Since the diagnosis of Crohn's disease he had remained on regular mesalazine, with five episodes of similar pain (and occasional pneumaturia) treated with intravenous steroids for presumed exacerbations of Crohn's disease.

Given the history of pneumaturia he was pending an outpatient magnetic resonance imaging scan to establish the presence of an enterovesical fistula. At admission, initial investigations revealed a negative urine dipstick for leucocytes and nitrites and only mildly raised inflammatory markers. A computed tomography scan demonstrated an abnormal sigmoid colon adherent to the bladder and anterior abdominal wall (*Figure 1*). There was also evidence of fluid within the left rectus abdominal sheath and of a fistulous tract between the bladder and sigmoid colon (*Figure 2*). Flexible sigmoidoscopy revealed an area of narrowing with tight angulation in the sigmoid colon and an abnormal red spot of uncertain aetiology, but there was no evidence of Crohn's disease macroscopically or histologically. Flexible cystoscopy showed thickening of the anterior dome of the bladder with a likely fistula opening superiorly, with non-specific cystitis on histology. Multidisciplinary team discussions concluded that the findings were more suggestive of a localized perforation of a sigmoid diverticulum 4 years earlier leading to secondary inflammatory erosion with the creation of a persistent enterovesical fistula. He therefore underwent a sigmoid colectomy and bladder wall repair.

At operation a mass was found in the left iliac fossa adherent to the bladder and abdominal wall and 5 ml of pus drained from an abscess in the anterior abdominal wall. Histology showed an inflamed and ulcerated diverticulum in the sigmoid and an acute and chronic inflammation with foreign body type multinucleated giant cell reaction in the bladder. The patient made a good recovery postoperatively with an early discharge and his longstanding medication for Crohn's disease was stopped.

rhoea, malabsorption and weight loss made the diagnosis of Crohn's disease less likely, especially when followed by a negative histology sample.

The presentation was also atypical and far more suggestive of an acute event such as bowel perforation. Although the development of an enterovesical fistula is a known complication of Crohn's disease, it also occurs in other conditions and should have drawn into question the original diagnosis of Crohn's disease and the need for long-term therapy.

Conclusions

With diverticular disease being the most common cause of enterovesical fistulae and a computed tomography scan clearly highlighting a track, this case emphasizes the need to review clinical information and re-evaluate information provided by investigations. Although diverticular disease is commonly thought of as a disease of the elderly, it does occur in younger patients where it is associated with obesity, male sex and atypical presentations (Cole and Wolfson, 2007). **BJHM**

Carter MJ, Lobo AJ, Travis SPL (2004) Guidelines for the management of inflammatory bowel disease in adults. *Gut* **53**(Suppl V): v1–v16

Cole CD, Wolfson AB (2007) Case Series: Diverticulitis in the Young. *J Emerg Med* **33**(4): 363–6

Garcea G, Majid I, Sutton CD, Pattenden CJ, Thomas WM (2006) Diagnosis and management of colovesical fistulae; six-year experience of 90 consecutive cases. *Colorectal Dis* **8**(4): 347–52

Kovalcik PJ, Veidenheimer MC, Corman ML, Coller JA (1976) Colovesical fistula. *Dis Colon Rectum* **19**(5): 425–7

Pollard SG, MacFarlane R, Greatorex R, Everett WG, Hartfall WG (1987) Colovesical fistula. *Ann Royal Coll Surg England* **69**: 163–5