

Entero-vesical fistula secondary to small-bowel B-cell lymphoma: a Case Report

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Citation

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Abstract

Small bowel B-cell lymphoma is a rare malignancy and its presentation is often variable if not elusive. We report a case of entero-vesical fistula secondary to small bowel B-cell lymphoma, the diagnosis of which was only identified after multiple investigations proved inconclusive, and an explorative laparotomy was therefore indicated. To our knowledge, there have been no previous reports of entero-vesical fistula as a manifestation of small bowel B-cell lymphoma, which is in itself an uncommonly reported malignancy.

BACKGROUND

Malignancies of the small bowel are amongst the rarest types of cancer, accounting for less than 5% of all gastrointestinal malignancies. [1] Of these, small bowel lymphoma is the second most common histological subtype; however, the insidious and nonspecific nature in which the disease presents means they are often misdiagnosed, or diagnosed late. [2] We describe a patient presenting with an entero-vesical fistula secondary to small bowel lymphoma; although there are a small number of cases of entero-vesical fistulas of colonic cancerous origin reported in the literature, [3] to our knowledge, there are no previous reports of entero-vesical fistulae secondary to small bowel lymphoma.

CASE PRESENTATION

An otherwise healthy 63-year-old woman presented to A & E as a GP referral for a 3-week history of unresolving urinary symptoms. These included dysuria, frequency, urgency, nocturia, haematuria and a degree of suprapubic discomfort. Multiple courses of antibiotic therapy had failed to provide any relief, and the onset of pneumaturia with the passage of 'sweetcorn' per urethra precipitated the patient's presentation to A & E.

On further questioning, the patient reported no history of weight loss, no alterations in bowel habit and a negative family history of any bowel conditions, including malignancy. It was noted, however, that she was an ex-smoker. Examination elicited mild tenderness in the suprapubic region with associated guarding, and all

haematological parameters were within normal range. A urine sample was taken; however, no analysis was undertaken due to the presence of food particles within the sample.

Following this, a number of imaging techniques were employed. A CT scan of the abdomen and pelvis identified the presence of a communication between the anterior bladder wall with a portion of small bowel, and the presence of gas pockets within the bladder. (Figures 1 and 2) No lymph nodal enlargement was noted in any region.

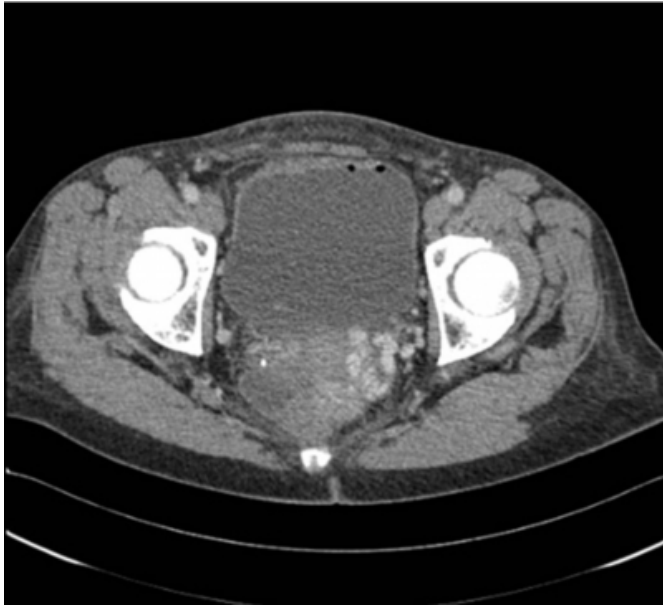
Figure 1

Figure 1: CT scan showing a communication between a portion of small bowel with the anterior bladder wall.



Figure 2

Figure 2: CT scan showing pockets of gas in the bladder



The differential diagnoses at this point included a fistula secondary to diverticular disease of the colon or a neoplastic process. Subsequently, a colonoscopy was undertaken to identify any intracolonic pathology; however, no lesions, inflammation or evidence of diverticular disease were visualised. A cystoscopy suggested the presence of small bowel content within the bladder, but was unable to yield further information due to the poor visualisation.

Consequently, a laparotomy was undertaken which exposed an inflammatory mass involving the appendix, mid transverse colon, terminal ileum, part of the small intestine and the urinary bladder. This was resected en-bloc from the bladder and the appropriate lumens were anastomosed in situ. Histological analysis of biopsy samples confirmed the presence of non-Hodgkin B-cell lymphoma of small bowel origin, and the necessary follow-up care was implemented.

DISCUSSION

Despite being surrounded anatomically by two regions of high neoplastic risk, the small bowel rarely develops cancerous changes. Only 750 people are diagnosed with small bowel cancer each year in the UK with a peak incidence at 60 years of age [4] and the majority of these tend to be of the adenocarcinoma histological subtype. [5] The four histological subtypes include: adenocarcinoma, lymphoma, sarcoma and carcinoid tumours. In contrast to adenocarcinoma, small bowel lymphoma is relatively rare in the developed world, has a predilection for the ileum where lymphoid tissue is more abundant, and has a relatively good

prognosis. [6]

Small bowel malignancies commonly manifest in advanced disease in a vague manner, with non-specific symptoms such as abdominal pain, nausea and/or vomiting, diarrhoea, and more ominously, weight loss. [7] In one analysis of 77 consecutive patients with primary small bowel malignancy over 22 years, average delays were 2 months before presentation to primary care physicians, 8 months from presentation until appropriate investigation, and 12 months from presentation until definitive diagnosis.[8]

The presence of pneumaturia in the context of gastrointestinal pathology is most commonly associated with diverticular disease of the colon as an aetiological factor. [9] Vesico-intestinal fistulae have also been reported secondary to malignancies of the gastrointestinal tract; however, these are invariably due to colonic tumours, with pneumaturia and faecaluria featuring as a pathognomonic sign in 50% of fistula cases. [3] Entero-vesical fistulae (those originating from the small intestine proper) have been reported but mainly as a complication of Crohn's Disease [8], and not as a consequence of small bowel malignancy.

Various forms of imaging can be applied to aid diagnosis of small bowel malignancy; however, the relative inaccessibility of the small bowel to, for example, endoscopy means that lesions at this site may go unidentified, particularly those distal to the ligament of Treitz. [7] Colonoscopy can be utilised to examine the terminal ileum. A radionucleotide-tagged red blood cell scan and angiography may also be used to determine the site of GI bleeding. Barium contrast studies are used to detect intraluminal or mucosal abnormalities beyond the duodenojejunal flexure, although this has limited sensitivity. [10] The accuracy of CT in detecting primary small bowel tumours is also limited, reported as 75% in an 85-patient study. [11]

Video capsule endoscopy is a relatively new clinical technology and has been shown to have a high sensitivity in identifying histologically confirmed small-bowel tumours. [12] However, the limited availability of this imaging technique coupled with the fruitless nature of more conventional modalities means that diagnostic laparoscopy or, as in this case, explorative laparotomy will be indicated. [13]

CONCLUSIONS

Small bowel malignancy is rare in incidence, and as the B-

cell lymphoma subtype is not the most common histological variant, it is even less likely to be encountered within a doctor's career. Additionally, the non-specific symptomatology of the disease provides no easily recognisable pattern of presentation. Entero-vesical fistula secondary to small bowel B-cell lymphoma has not been, to our knowledge, previously reported, and therefore this case report provides yet further evidence for the varying manifestations and elusive nature of the disease.

Furthermore, the relative inaccessibility of the small intestine to imaging, coupled with the fact that the majority of investigations do not possess a high specificity for small bowel malignancy, adds considerably to the diagnostic challenge. Thus it is vital that doctors retain a degree of clinical suspicion for small bowel malignancy in the setting of such vague gastrointestinal symptoms, and appreciate the use of explorative laparotomy in providing a definitive diagnosis.

LIST OF ABBREVIATIONS

A & E: Accident and Emergency

GP: General Practitioner

CT: Computed tomography

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