

Case Report

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Colonic adenocarcinoma with urinary bladder extension presenting as an anterior abdominal wall abscess: a case report

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Abstract

Colonic adenocarcinoma with urinary bladder wall extension presenting as an anterior abdominal abscess is a very rare occurrence. We present our rural experience and challenges with this pattern of presentation in a 65-year-old woman who had drainage of abscess, partial cystectomy and right hemicolectomy. She also received three (3) cycles of chemotherapy before she defaulted during the heat of the covid-19 pandemic in 2020. A follow-up call revealed she died at home after a brief undiagnosed febrile illness.

Keywords: Abdominal wall, abscess, colonic cancer, bladder tumour.

Introduction

The typical presentation of colonic tumours includes a change in bowel habits, anorexia, weakness, weight loss and passage of blood in stool [1]. A colonic tumour can advance and invade adjacent structures, such as anterior abdominal wall, urinary bladder and uterus, to give a wider spectrum of presentation even in the absence of distant metastasis. Direct infiltration into the anterior abdominal wall to form an abscess with simultaneous bladder wall extension is a very rare presentation [1,2]. The diagnosis of this atypical emergency presentation is challenging especially in a rural hospital setting where adequate complementary diagnostic investigations are not readily available. This will also make its management daunting and largely palliative. This report, therefore, draws awareness to this pattern of presentation encountered in our centre and highlights the challenges in the management of the patient.

Case

A 65-year-old woman presented to our hospital Emergency Department with a 4-week history of progressive painful right lower abdominal wall swelling of insidious onset, associated with a high-grade fever, chills rigors and several episodes of effortless non-

bilious vomiting. She had anorexia and weight loss but there was no history of preceding trauma to the abdomen, change in bowel habits, abdominal distension, lumbar pain or haematuria. She was hypertensive, but was not diabetic, not on any steroidal drug and unaware of her retroviral status. She has had an emergency caesarean section (EMCS) 43 years earlier. She did not report any drug or food allergy during the interview.

At the time of presentation in the hospital, she was ill-looking and pale with a pulse of 102/min, blood pressure of 110/70 mmHg, respiratory rate of 23/min and body temperature of 36 °C. There was a prominent midline infraumbilical scar, a hyperaemic, warm and tender swelling on the right iliac fossa extending to the umbilical area and measuring about 10cm x 10cm (Figure 1). Other examination findings including a rectal examination were normal.

Laboratory results showed leucocytosis (WBC 12,700/mm³), neutrophilia (79.2%), anaemia (PCV 29%) and reactive thrombocytosis (platelet 807,000/mm³). The urinalysis showed pH 6.0, specific gravity of 1.030, protein (trace), blood (++) and leukocyte (++) . Her electrolytes, urea, creatinine, and random blood glucose were normal. Abdominal ultrasound scanning revealed a distortion of the musculofascial plane of the anterior abdominal wall with the presence of turbid collection and debris

estimated as 112 ml and no demonstrable intraabdominal extension. There was an echogenic mass with irregular margin within the urinary bladder measuring 9.4cm x 7.4cm; no ascites or para-aortic lymphadenopathy. Her retroviral and COVID-19 PCR tests were negative.



Figure 1: Pre-op photograph of the abdomen. The starred area indicates the site of abscess on the anterior abdominal wall. Infra-umbilical scar of previous surgery is seen on the midline

She was counselled and booked for incision and drainage of the abscess under general anaesthesia. Intraoperative findings were an abscess cavity containing about 100 ml of pus. Subsequently, a myxomatous mass with necrotic tissues was encountered at the depth of the cavity and this was observed to have extended deep into the peritoneal cavity. A proper midline laparotomy revealed the mass was in communication with the dome of the bladder and the caecum and appendix were morbidly attached to it (Figures 2 and 3). There were also exophytic necrotic and fleshy masses extending from the dome of the bladder towards the right lateral wall. There were no ascites and abdominal lymphadenopathy. Intraoperative consideration was a locally advanced bladder tumour attached to the caecum and appendix or a granulomatous inflammatory lesion. A limited right hemicolectomy and primary ileocolic anastomosis in addition to partial cystectomy were done. A drain was left in the pelvis, the laparotomy wound was closed in layers while the abscess cavity was left open for daily dressing and healing by second intention.



Figure 2: Intra-op photograph of (A) the necrotic tumour mass and (B) the bulb of the urethra catheter in the bladder. In A, the lower forceps are seen holding the edges of the bladder while the uppermost one is holding on the tip of the appendix. Starred area represents the initial I&D incision. In B, the bulb of the urethra catheter is protruding through the mass (represented with the starred mark) on the bladder wall

In the early postoperative period, she was co-managed by the cardiology and neuropsychiatry unit for moderate hypertension and hyperactive delirium respectively. She also had a superficial surgical site infection on the midline laparotomy wound that was treated with antibiotics and simple drainage. The indwelling bladder catheter was removed after 21 days. Histology of the resected specimen showed colonic adenocarcinoma with bladder wall extension.

She was optimized for chemotherapy by transfusing with two pints of blood for a haematocrit of 26%. The chemotherapy regimen (FOLFOX-4) was started even before her wounds healed completely. This consisted of the use of oxaliplatin (85mg/m² for day 1), 5-fluorouracil 400 mg/m² bolus and 600 mg/m² continuous infusion for 22 hours (for days 1 and 2) and leucovorin 200 mg/m² (for days 1 and 2). She improved remarkably but defaulted after the 3rd cycle of chemotherapy. A follow-up call revealed that she was scared of contracting COVID-19 infection and avoided the hospital which at that time was a major referral centre in Nigeria during the heat of the COVID-19 pandemic. She was also reported to have died following a brief undiagnosed febrile illness during the same period.

Discussion

Locally advanced colorectal carcinoma invades adjacent structures in about 5-22% of cases and infiltrates or ruptures into the anterior abdominal wall to form abscesses in about 0.3-4% of cases [1,2,3]. A direct infiltration into the anterior abdominal wall to form an abscess with simultaneous bladder wall extension is a very rare presentation [1,2]. These atypical presentations of colonic cancer present several challenges in diagnosis and management. The diagnosis is often delayed or unrecognized especially without an adequate complementary diagnostic imaging tool as was observed in this reported case. With the benefit of hindsight, the ultrasound finding of a bladder mass in this patient should have raised suspicion of underlying pathology. CT scan and CT colonography are very useful tools to evaluate the tumour, stage the disease and plan surgery [2,4]. Despite this, accurate preoperative diagnosis may still be difficult and is only reliably made during surgery [1].

For locally advanced colorectal cancers, radical and en-bloc resection is the best guarantee of having a curative surgery and the prognosis and survival are similar to the standard operation if an R₀ resection is attained [4]. These surgeries are equally very challenging and may require multivisceral resections and repair of the defect on the anterior abdominal wall [3]. Depending on the condition of the patient at presentation, surgery can be planned in stages with drainage of the abscess being the initial management followed by the radical surgery [1].

Incomplete tumour clearance will be fraught with a high risk of local recurrence. The case presented above is one that was unanticipated and so complete tumour clearance was not attained as this will have required a planned resection of the abscess cavity in addition to the hemicolectomy and partial cystectomy. Interestingly, the postoperative and oncologic outcomes of partial cystectomy have been shown to be better than total cystectomy for colorectal tumours involving the urinary bladder [5]. In one case report in Italy where the patient had abdominal wall abscess and bladder extension that was similar to this case presented, their patient had initial drainage of abscess, followed by extended right hemicolectomy with en-bloc excision of the bladder dome, the right annexe and full-thickness removal of the anterior abdominal wall (including the abscess cavity), biologic mesh reconstruction of the anterior abdominal wall, VAC and then a skin graft [4]. An unresectable tumour will require neoadjuvant chemotherapy. HIPEC and systemic chemotherapy can reduce local recurrence and improve postresection survival [4].

Conclusion

Though rare, colorectal tumours can infiltrate or rupture into the anterior abdominal wall to form an abscess. Abdominal wall abscesses in elderly patients should, therefore, be properly evaluated to rule out an underlying malignancy and to aid planning for curative resection in an operable patient.

List of abbreviations

EMCS, Emergency caesarean section; PCV, Packed cell volume; CT, Computed tomography; PCR, Polymerase chain reaction; VAC, Vacuum-assisted closure; HIPEC, Hyperthermic intraperitoneal chemotherapy.

Declarations

Ethical approval

None provided.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

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Contribution of Authors

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