



Transverse Colon Tumour Masquerading as an Incarcerated Paraumbilical Hernia

Mandy Mak*, Adaugo Amajuoyi, Faye Smith, Abdul R Hakeem and Vamsi Velchuru

Department of General Surgery, James Paget University Hospital NHS Trust, UK

Abstract

We report a case of direct invasion of colonic tumour into the abdominal wall, masquerading as a strangulated paraumbilical hernia. An elderly patient presented with a week's history of abdominal lump, with abdominal bloating, nausea and reduced appetite. There was no history of vomiting or weight loss. She had multiple co-morbidities and a poor pre-morbid performance status. Clinical examination revealed a large paraumbilical erythematous swelling, irreducible and tender to touch-features in keeping with an incarcerated paraumbilical hernia. Contrasted CT abdomen revealed a transverse colon tumour, with anterior abdominal wall invasion and multiple liver metastases. The patient was treated conservatively following multidisciplinary team discussion, and passed away three months after from a thromboembolic event. The case illustrates the importance of considering malignancy as a differential especially in elderly population presenting with abdominal wall hernias or masses.

Keywords: Oncology; Colon cancer; Gastrointestinal surgery; Colorectal surgery

Introduction

Tumors arising from the umbilicus are rare; it has been reported to be a site of metastases of intra-abdominal cancer [1]. Current literature describes umbilical and paraumbilical hernias as rare initial presentations of an internal malignancy – likely attributed to increased abdominal pressure secondary to ascites, umbilical metastases or both in combination [1-3]. The case highlights two important clinical domains—detailed history-taking and a need to consider malignancy as a differential in elderly population presenting with abdominal masses, to ensure the correct diagnosis. Large abdominal wall hernias presenting with incarceration or strangulation, usually have bowel loops within them causing luminal obstruction and vomiting. The lack of vomiting in this patient prompted the clinician to suspect diagnosis other than hernias. Many surgeons would have taken the patient straight to theatre without a Computed Tomography (CT) scan, which would have led to surprising operative findings, and likely cause unnecessary morbidity to the patient.

Case Presentation

An 85-year-old Caucasian lady presented with a week's history of central abdominal lump, associated bloating, reduced appetite and nausea. She denied any noticeable lump prior to a week ago, although this had increased in size over the last 48 h. She last opened her bowels four days ago, and was passing flatus. She denied any history of vomiting, weight loss, abdominal trauma or urinary symptoms. Her past medical history included cerebrovascular accident, atrial flutter, hypertension, asthma, moderate-to-severe aortic stenosis, mild-to-moderate aortic regurgitation, and previous unprovoked pulmonary embolism. Her past surgical history included a porcine aortic valve replacement, total abdominal hysterectomy for dysfunctional uterine bleeding, and a right hemiarthroplasty for a fractured neck of femur. She had suffered an acute upper gastrointestinal bleed while being anti-coagulated on warfarin, and therefore had been on anti-platelet therapy. She was a non-smoker, with limited alcohol intake. She used a Zimmer frame to mobilize; her baseline World Health Organization (WHO) performance status was 2. She lived with her husband, who is her main career. There was no family history of malignancy. On arrival, she was afebrile and hemodynamically stable. Clinical examination revealed an 8 cm × 10 cm paraumbilical swelling, which was erythematous, tender, irreducible and firm on palpation (Figure 1a and 1b). There was an absent cough impulse.

Investigations

Blood tests revealed: white cell count $19.8 \times 10^9/L$ (neutrophilia of $16.86 \times 10^9/L$), microcytic

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*Correspondence:

Mandy Mak, Department of General Surgery, James Paget University Hospital NHS Trust, Great Yarmouth, NR31 6LA, UK,

E-mail: mandy.mak@doctors.org.uk

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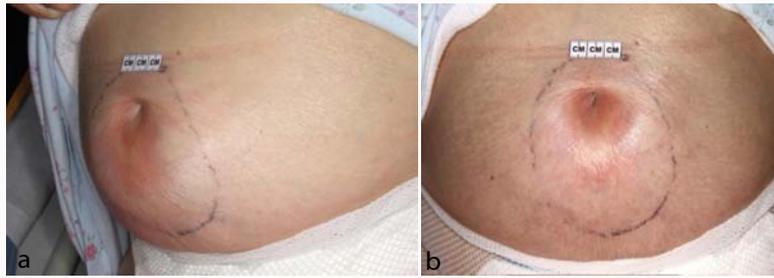


Figure 1a and 1b: Large paraumbilical swelling as seen on patient.

anemia (hemoglobin 91 g/L, mean cell volume 79.7 fL), C-reactive protein 110 mg/L, urea 12.1 mmol/L, creatinine 101 mmol/L, albumin 21 g/L, international normalized ratio 1.35. Her liver function tests, amylase and serum lactate were within normal limits. A contrast-enhanced CT of the abdomen and pelvis identified a midline transverse colon tumour extending anteriorly through the abdominal wall and into the subcutaneous fat, with surrounding fat stranding and few pericolic lymph nodes (Figure 2). Multiple liver metastases were also present.

Treatment

The diagnosis- and the palliative nature of further treatment-were discussed with the patient and her family. Following discussion at the multidisciplinary team meeting, the patient was not considered for palliative chemotherapy in view of her co-morbidities. She received antibiotics for cellulitis over the abdominal lump and was discharged home.

Outcome and follow-up

The patient was followed up in the community by the Macmillan team. She remained asymptomatic apart from a palpable abdominal lump. Three months following her initial presentation, she developed complete occlusion of her left common femoral artery. Deemed an unsuitable candidate for surgery under general anesthesia, she was conservatively managed with therapeutic low molecular heparin, and passed away shortly after in the community.

Discussion

An umbilical or paraumbilical hernia may be the first sign of intra-abdominal tumors [1]. These hernias make up 8% to 12% of all abdominal wall hernias; current literature estimates malignant tumors presenting as hernias occur in less than 0.1% of all cases [1]. Most umbilical hernias are acquired; they are commonly found in patients with conditions leading to a chronic increase in abdominal pressure, such as obesity, chronic cough, pregnancy, presence of intra-abdominal mass, ascites [4]. Tumors arising from the umbilicus are rare. Umbilical metastases (Sister Mary Joseph's nodules) have been associated with 3% of patients with intra-abdominal or gynecological malignancies, with carcinomas of gastric origin commonest in men, and ovarian, in women [3]. These umbilical metastases have been hypothesized to arise from lymphatic drainage from the para-aortic nodes, or as direct extensions from the peritoneum, along embryonic remnants [5]. Shetty reviewed all cases related to "Sister Mary Joseph's nodule" from 1830 to 1989—a total of 285 cases were reported [3]. This patient had a unique presentation of direct invasion of colonic cancer into the abdominal wall, clinically mimicking an incarcerated hernia. A differential of the erythematous swelling could be a Sister Mary Joseph's nodule—its clinical presentations vary from a soft swelling



Figure 2: Midline transverse colon tumour (circle) with anterior abdominal wall and subcutaneous fat invasion (arrow).

to a painful, ulcerated mass, with or without discharge, which is often serosanguinous or bloody [5]. Initially, the patient's sub-acute presentation led to a strong suspicion of an incarcerated paraumbilical hernia. She had denied any history of vomiting, which was pertinent, when considering the clinical features and the differential diagnosis of bowel obstruction and strangulation. Large abdominal wall hernias—when presenting with incarceration or strangulation—often contain bowel loops, causing luminal obstruction and symptoms of vomiting. The absence of vomiting in this patient prompted the clinician to consider an alternative diagnosis. That said, omentum could have been the sole content in a hernia sac, therefore patient will report no history of vomiting. The lack of a cough impulse could have been a negative finding, but this may be absent in incarceration or a large, tense hernia. Despite the initial clinical diagnosis, the decision for a CT scan saved a frail patient from undergoing an unnecessary operation, and its associated morbidities. This case demonstrates the relevance of considering malignancy as a differential in the elderly population presenting with abdominal wall masses. Imaging in selected patients can provide invaluable information for forming an accurate diagnosis. The appropriate use of CT in this case empowered clinicians to form a safe management plan, saving the patient from an operation that is—in this case—not in the patient's best interests, and its associated morbidities.

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