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Myofibroblastic infiltration of the bowel: A case report and literature review

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ABSTRACT

INTRODUCTION: Inflammatory myofibroblastic tumours (IMTs), are uncommon tumours which can act with malignant potential. The management of these tumours can be extremely problematic but are often referred to surgical multi-disciplinary team meetings with the intention of surgical and oncological management (Chaudhary [1]).

CASE REPORT: A 69-year-old gentleman was admitted with a 2-day history of abdominal pain and vomiting, and a 4-day history of absolute constipation. CT Abdomen Pelvis demonstrated distended loops of small bowel with pronounced fluid levels but no transition point. Intra-operative findings showed a right ileocolic mass adherent to the pelvic side wall and omental caking. Biopsies showed a florid myofibroblastic reaction, not a malignant process.

CONCLUSION: IMTS are aggressive lesions but metastases is rare. Abdominal IMTS are difficult to diagnose and manage as they are often initially mistaken for lymphoma or peritoneal metastases. The therapy of choice is surgical resection of the tumour (Firat et al. [3]).

1. Introduction

Inflammatory myofibroblastic tumours (IMTs), are uncommon tumours found most commonly in the lung, mesentery, and omentum [1].

We present the case of a 69-year-old gentleman who presented in intestinal obstruction and diagnosed with inflammatory myofibroblastic tumour of the omentum. This case was reported in line with the SCARE criteria [2].

2. Case report

A 69-year-old gentleman presented to the Emergency department with a 2-week history of central and lower abdominal pain, bloating associated with nausea, bilious vomiting, and 3-days of absolute constipation. He presented a week prior to his GP with similar symptoms and was treated for a UTI with a course of oral ciprofloxacin. His past medical history was significant for recurrent UTIs and an underactive bladder for which he self-catheterizes. On examination, abdomen was distended with generalized tenderness. Rectal examination showed an empty rectum. Blood results revealed WCC 12.8×10^9/L, and CRP of 54 mg/L. Erect chest x-ray showed no evidence of pneumoperitoneum, abdominal x-ray showed dilated small bowel loops.

A contrast CT abdomen/pelvis showed nonspecific free fluid throughout the abdomen, dilated small bowel loops and a segmental jejunal loop with bowel wall thickening and omental stranding (Figs. 1 and 2). An exploratory laparotomy revealed copious straw-coloured ascites, a large ileo-caecal mass adherent to the posterior abdominal wall, heavy serosal and meso-colonic involvement from the caecum to the sigmoid with marked omental caking. Given these findings, the mass was deemed irresectable. A small bowel resection, excision omental biopsy and an end ileostomy was performed. Tumour markers showed a raised Ca-125 and normal CEA and Ca19-9. Histopathology showed extrinsic infiltration by serosa-based spindle and epithelioid tumour. The cells showed prominent nuclear pleomorphism and frequent mitosis. The tumour infiltrated through the muscularis propria and mucosa leading to focal perforation. Immunophenotyping favoured a florid myofibroblastic reaction rather than a malignant process (Figs. 3–7). He recovered well post-operatively and was discharged. He was readmitted a week later with ongoing small bowel obstruction and intra-abdominal sepsis. CT abdomen/pelvis showed 3 fluid collections causing a reactive ileus. He was treated conservatively with naso-gastric tube decompression, intravenous fluids and total parenteral nutrition. Unfortunately, during his admission, he vomited, aspirated, followed by cardiopulmonary arrest and he passed away despite attempted resuscitation. Post mortem revealed that the small bowel and colon were encased in thick, dense fibrofatty adhesions also encasing the pancreas, spleen, diaphragm, inferior and

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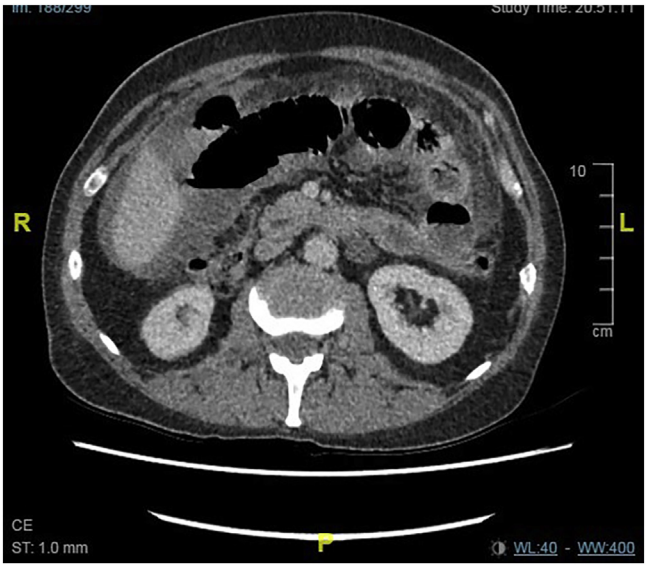

Fig. 1. Axial view of CT abdomen and pelvis showing high density ascites and omental stranding.

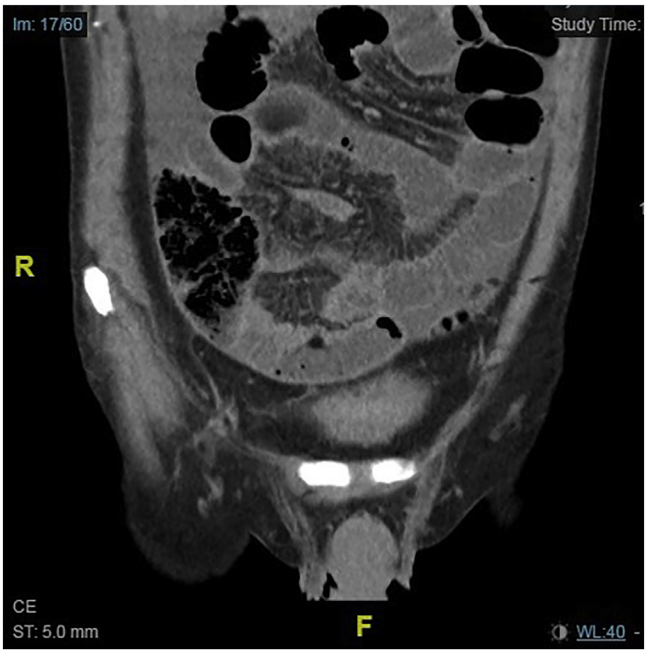

Fig. 2. Coronal view of CT abdomen and pelvis showing high density ascites and omental stranding.

posterior aspect of the liver, gallbladder, and the stomach. This had formed one large mass.

3. Discussion

IMTs had previously been accepted as a subtype of the group of tumours called inflammatory pseudotumours [3]. Previously inflammatory fibrosarcomas [1], IMTs are now recognized to comprise their own discrete diagnosis.

The terminology 'inflammatory pseudotumour' was first coined by Umikar and Ivenson in 1954 in 4 cases reports involving the lung [4]. IMTs primarily occur in the lung and upper respiratory tract but may affect any organ system with protean manifestations [5] including heart, liver, omentum, mesentry, vagina, and kidneys [4]. Once thought to be reactive, these lesions are now considered to be neoplastic thus the terminology changed from inflammatory myofibrohistiocytic proliferations or pseudosarcomatous myofibroblastic proliferations to IMTs [1].

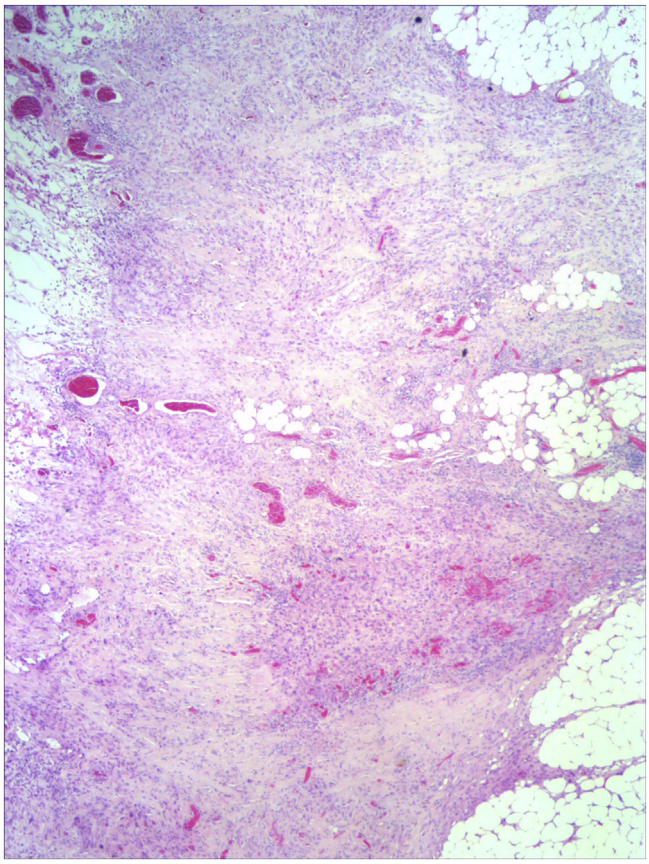

Fig. 3. Histopathology of omental biopsies showing benign fibroblastic proliferation.

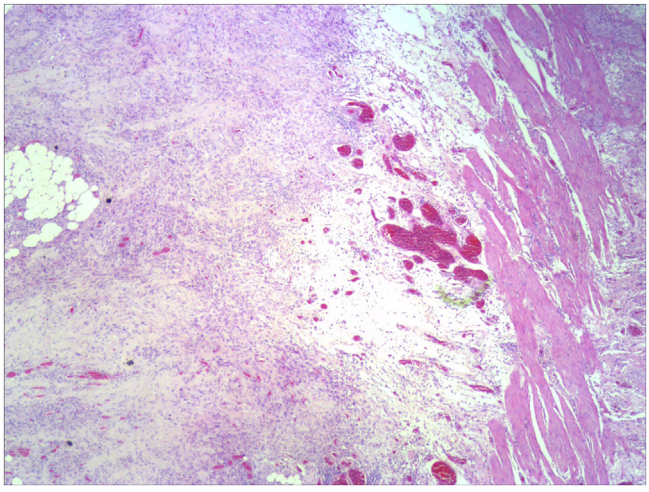

Fig. 4. Histopathology of omental biopsies showing benign fibroblastic proliferation.

IMTs are most common in children [4] with a mean age of 10 years. They are reported in patients between 3 months to 46 years [1]. IMTs have a slight male predominance but no race predominance [1]. The current histopathological definition of an IMT is a distinctive neoplasm composed of myofibroblastic mesenchymal spindle cells accompanied by an inflammatory infiltrate of plasma cells [3].