ACUTE PERFORATED SCHISTOSOMAL APPENDICITIS: A CASE REPORT

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ABSTRACT

Appendicitis is occasionally the first clinical manifestation of schistosomal infestation which may require treatment. A rare case of perforated schistosomal appendicitis in a 12 year old Nigerian boy diagnosed on the basis of histological evaluation of the appendectomy specimen is reported to highlight the clinical presentation and management of the condition.

Key words: Appendicitis; Schistosomiasis; Perforation; Complications

INTRODUCTION

Acute appendicitis is the most common cause of surgical acute abdomen world wide.[1] The morbidity and mortality associated with appendicitis is generally low, but is increased when perforation occurs, and it is estimated at about 2% of cases.[2] Appendicitis is occasionally the first clinical manifestation of schistosomal infestation.[3] Gross examination of appendectomy specimen in schistosomal appendicitis (SA) demonstrate hyperaemia, congestion, inflammation, fibrosis and occasionally gangrene, but there are very few recorded cases of perforation described in the modern literature.[4,5] In this report, we here in present a case of appendiceal perforation in a child in which histology revealed acute schistosomal appendicitis.

CASE HISTORY

A 12 year old male Nigerian pupil was admitted into the surgical emergency unit of Aminu Kano Teaching Hospital with a 3 day history of generalized abdominal pain and 2 days history of fever and abdominal distension. There was associated bilious vomiting, but no diarrhoea, constipation or bloody stools. Abdominal pains had been mild and recurrent during the previous 5 months and had mainly affected the lower abdomen, but the present episode was generalized and severe. There were no urinary symptoms.

Physical examination revealed an acutely ill-looking boy who was dehydrated, and pyrexic with a temperature of 38.1°C. Respiratory and cardiovascular systems were essentially normal, except for tachycardia (pulse rate of 110 beats per minute) and tachypnoea (respiratory rate of 40 per minute). The abdomen was uniformly distended, with generalized tenderness and guarding. Evidence of free fluid in the peritoneal cavity was detected and bowel sounds were diminished. Rectal examination confirmed fullness in the rectovesical pouch.

A diagnosis of perforated appendix with generalized peritonitis was made to rule out a perforated Typhoid ileitis. Resuscitation was immediately commenced and urgent laboratory investigations performed. The full blood count showed a haemoglobin of 8g dl^{-1} and leucocytosis of 16 x $10^{9}L^{-1}$. Serum urea and electrolytes were normal except for hypokalaemia (potassium, 2.9. mmol/L. Liver function tests were all found to be within normal reference values. Anaemia and hypokalaemia were corrected, and intravenous ceftriaxone and metronidazole administered.

An emergency laparotomy was performed during which 3 litres of offensive pus was drained from the peritoneal cavity. A perforated retrocaecal appendix was found and appendectomy effected, with copious lavage of the peritoneal cavity. A drain was left insitu in the right iliac fossa.

Postoperatively, the patient was maintained on antibiotics and intravenous fluids and oral sips were commenced on the third postoperative day. He developed postoperative wound infection which was managed by daily wound dressing with Eusol. He was discharged on the twelfth

postoperative day to be followed up at the surgical out patient clinic.

The Appendectomy specimen was examined at the Histopathology laboratory. It measured 8.5cm in length, and had an external diameter ranging from 0.6 to 0.8cm. An area of perforation was present midway between the tip and base. The serosa was coated with a fibrinopurulent exudate.

Histology showed acid fast negative schistosoma haematobium ova in the submucosa and muscularis. There was accompanying haemorrhage, necrosis and infiltrates of eosinophils, neutrophils, lymphocytes and multinucleated giant cells. (Figs 1 and 2).

At follow up, oral praziquantel was administered in view of the histopathology report, and the patient has remained well at 1 year of follow up.

DISCUSSION

Schistosomal appendicitis constitutes 1.3% to 7% of appendicitis cases in schistosoma endemic regions. [3,6,7] The patient in this report was 12 years old, which is consistent with the peak age incidence of 11 to 15 years in Nigerian patients reported by Duvie et al.[4] There are no reliable clinical or laboratory features by which SA can be predicted preoperatively.[3] This is also evident in this case where tests of liver function were normal similar to the findings in Saudi Arabian patients, none of whom had abnormal liver function tests to raise the suspicion of schistosomiasis preoperatively.[5] Eosinophilia, a common feature of schistosomiasis was also notably absent, an observation which has earlier been reported by Meshikhes et al. [8,5]

Follow up evaluation of patients with SA does not reveal an increased morbidity or mortality when compared with cases of non schistosomal appendicitis.[3] Appendiceal perforation can be complicated by peritonitis, pylephlebitis, portal mesenteric vein thrombosis, liver abscesses, septicaemia and intestinal obstruction.[2,9] The present case indicates that although surgical complications are uncommon in SA,[4] when associated with perforation, the morbidity may not necessarily be increased if a meticulous approach is followed at surgery, complemented by perioperative use of antiobiotics.

Delay in diagnosis has been proposed as contributing to the increased frequency of morbidity and mortality related to appendicitis.[10] Atypical presentation may be a confounding factor to delayed diagnosis, as up to 15% of patients with SA present with symptoms which are not classical for acute appendicitis.[3] SA should therefore be suspected in patients coming from endemic areas with a history of recurrent abdominal pain as was the presentation in this patient. It is unlikely that antischistosomal therapy in the immediate postoperative period would have modified the outcome in this case. It is however recommended that histopathology reports of appendectomy specimen be processed as early as possible for patient living in endemic areas so that appropriate antischistosomiasis treatment can be administered, particularly as schistosoma ova are most frequently absent in the urine and stool of patients with SA. This will prevent further complications in organs such as the liver and urinary bladder.

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