Case Report

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Child abdominal tumour in tropical context: Think about schistosomiasis!

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ABSTRACT

Schistosomiasis presenting as an abdominal mass with chronic pain in a child is not common. This report presents case of child presenting with schistosomiasis presenting as an abdominal mass with chronic pain. Abdominal ultrasonography did not particularly contribute to definitive pre-operative diagnosis. However, pathological examination of surgical specimen confirmed *Schistosoma mansoni* eggs in the biospy. A decrease in the mass volume was noticed under medical treatment (Biltricide). The aim of this report was to intimate clinicians on possible abdominal schistosomiasis as differential diagnosis of childhood abdominal mass. This is a clarion call for a high index of suspicion of childhood abdominal schistosomiasis in children presenting with abdominal mass in a tropical setting.

Key words: Abdominal mass, abdominal schistosomiasis, child

INTRODUCTION

Although abdominal mass is common in pediatrics, differential diagnosis often overlooks less frequent benign diseases such as parasitosis, even in an endemic area. This report presents case of schistosomiasis presenting as an abdominal mass with chronic pain in child in a tropical setting and aimed to intimate clinicians on possible abdominal schistosomiasis as differential diagnosis of childhood abdominal mass.

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CASE REPORT

This was a case report of a 15-year-old boy presented with intermittent abdominal pain of 3 years' duration, associated with progressive abdominal distension and intermittent vomiting. Physical examination revealed abdominal distension with a right-sided, firm, fixed and non-tender abdomino-pelvic mass. An initial impression of possible Grawitz tumour, mesenteric tumour, benign small intestine tumour, teratoma, or rhabdomyosarcoma was made.

A complete blood work-up was unremarkable. Abdominal ultrasonography did not particularly contribute to definitive pre-operative diagnosis; it only showed a heterogenic abdomino-pelvic tissue mass compressing on the right ureter. The ultrasound examination revealed neither hepatomegaly, nor ascites or any other abnormality. Pre and post contrast abdominal computed tomography (CT) scan depicted a well-delineated, spontaneously heterogeneous and dense retroperitoneal tissue mass, measuring 200 mm × 150 mm, encasing the superior mesenteric artery with a mass effect on surrounding bowel. Other smaller nodules presenting the same characteristics were also depicted in the right iliac fossa and all along the right internal iliac artery [Figure 1]. CT scan confirmed the absence of ascites and adenopathy.

Explorative laparotomy showed a mass which was adhered to the ileocoecal region and the appendix which had a nodule measuring nearly 4 cm on its distal end [Figure 2]. The mass was partially resected and the anatomopathological examination of specimen revealed several *Schistosoma mansoni* eggs, thus confirming the diagnosis of bilharzia. Patient was started on oral schistosomicide (Biltricide), in a single dose of 40 mg/kg of body weight every 2 months during 6 months. The patient was discharged 7 days after surgery and follow-up included clinical evaluation to assess patient's overall status, abdominal mass and

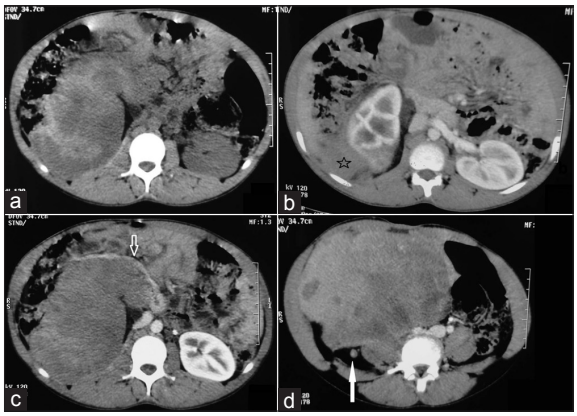


Figure 1: Computed tomography: Pre- (a) and post-contrast, (b-d) superior mesenteric artery (empty arrow). Smaller nodules (white arrow) in the right iliac fossa

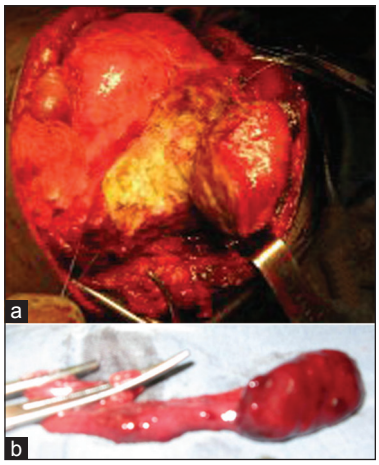


Figure 2: The tumour and the removal of the tumour lobe (a). Appendix (b)

tolerance to drug therapy, as well as blood cell count and abdominal CT scan at 6 months. The improvement has been remarkable as evidenced by progressive decrease in abdominal girth and the mass volume monitored by serial abdominal CT scan.

DISCUSSION

Schistosomiasis is endemic in many tropical regions including Africa, Asia and South-America. About 200 million of persons are affected all over the world.[1] In our setting, *S. mansoni* has a prevalence of between 0% and 7%, while *Schistosoma haematobium* is 6-76%.[2] Clinical signs associated with schistosomiasis depend on the organ affected. They may be acute due to a hypersensitivity reaction, or chronic due to a chronic inflammation egg induced fibrosis in infested tissues. *S. mansoni* localisations are mainly in the intestinal tract. Chronic forms of pulmonary,[3] neuroencephalic,[4] genital,[4] splenic[5] schistosomiasis are documented. However, schistosomiasis presenting as an abdominal mass is rare.[6] Even rarer is retroperitoneal localisation, which to the best of our knowledge, has never been reported. Our patient presented with retroperitoneal schsitosmiasis pseudotumour (possibly due to a chronic inflammatory reaction) probably due to the dissemination of eggs within the mesocaecum either through infested caecum or via the bloodstream.

Management of abdominal masses in children is a challenging issue. The spectrum of differential diagnosis includes benign and malignant tumours. However in tropical regions with endemic parasitosis other diagnoses must also be taken into account. Schistosomiasis should be suspected in children who present with abdominal mass with chronic digestive symptoms contrasting with a preserved general status and normal laboratory findings. If in doubt, a percutaneous image guided or laparoscopic biopsies may settle the differential diagnosis especially stools microscopy or immunological test is negative for *S. mansoni*, or blood examination is negative for *S. haematobium*.

The treatment of chronic (tumoural) forms of schistosomiasis has not been codified. Administration of Biltricide (40 mg/kg) remains mandatory, as it breaks the parasite cycle, preventing therefore further dissemination. In case of tumours, this treatment is extended, controlled clinically and by CT or ultrasound. Follow-up by ultrasound preferentially or CT scan assesses the progression or response of the mass.[3,7]

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