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Tubal Schistosomiasis in Brazilian Women: A Case Report

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Abstract: Several authors have reported schistosomiasis caused by Schistosoma haematobium in the female genital tract of patients in endemic areas. This work describes tubal schistosomiasis by Schistosoma mansoni in a Brazilian woman submitted to hysterectomy for uterine myomatosis and metrorrhagia. Macroscopy evidenced hydrosalpinx of the left tube and multiple Schistosoma mansoni eggs were identified by anatomopathological examination. This article illustrates a rare form of schistosomiasis as the cause of tubal damage.

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Introduction

Schistosomiasis is a global parasitic disease found in more than 70 countries, where 600 millions of people are at risk of becoming infected and around 200 millions may be infected by one of the different species of Schistosoma that affect humans. The most important species of this parasite are S. mansoni, S. japonicum and S. haematobium [1].

The majority of infected individuals has mild symptoms or remains asymptomatic. The symptoms in the acute phase can include fever, anorexia, abdominal pain, cephalea, nausea, vomiting and diarrhoea. The chronic phase presents with varied clinical manifestations depending on the infection site (generally in the hepatic and mesenteric circulation) and intensity of the parasitism, the response of the individual and the established treatment. Mucosanguineous diarrheas together with abdominal pain are common. Hepatosplenomegaly and signs of portal hypertension that may evolve to cirrhosis, severe splenomegaly, ascites, collateral circulation, varicose veins in the esophagus, hematemesis, acute anaemia, malnutrition and hypersplenism characterize the most severe spectrum of the disease. Diagnosis is confirmed by performing a parasitological examination of the faeces. Treatment involves two medications, 50 mg/kg praziquantal and 20 mg/kg oxamniquine, both of which have cure rates of greater than 80% and good tolerability in simplified regimens with a single oral dose [2–4].

First reports of female genital tract schistosomiasis date from 1899 in Egypt [3, 4]. Subsequently, several works were published demonstrating the presence of Schistosoma sp. eggs in female genital organs from endemic regions.

Most reports are African cases involving Schistosoma haematobium [5, 6] and it is believed that the ratio of S. haematobium/S. mansoni cases in the female genital tract in Africa is 1:0.1 to 0.3 [4].

In Brazil, most cases were published in the 1940s and 1950s when schistosomiasis was first studied. Since then, practically no studies have been published possibly due to a global reduction in the cases of schistosomiasis because of improvements in treatment, vector control, education and basic sanitary conditions. Additionally, it is believed there have been cases of gynaecological tract infections by S. mansoni but, as the gynaecological symptoms were vague, cases were underdiagnosed or medical assistance was not sought [4, 5].

Hence, this gynaecological entity has been ignored and deserves further epidemiological, physiopathological, diagnostic and therapeutic investigation [4].

Case report

We report the case of a 40-year-old multiparous Brazilian housewife (g4p4) from Palestine, São Paulo state, a non-endemic area for schistosomiasis. The patient was being treated for chronic hypertension and reported being submitted to four caesareans, the last associated with tubal sterilization. No other surgeries or comorbidities were reported.

She was admitted into hospital under the following conditions: metrorrhagia over the previous six months associated with asthenia and dizziness. Ultrasonography demonstrated the uterus was enlarged (volume 203 cm^3) with several intramural myomatous nodules measuring from 0.5 to 1.0 cm in diameter. The endometrial thickness was 0.9 cm, normal for the hormonal phase of the patient. An endometrial biopsy was not performed. She was submitted to cyclic estrogen-prosterone therapy (2 mg estradiol valerate for 11 days/2 mg estradiol valerate and 1 mg cyproterone acetate for 10 days) for three months with an increase in menstrual flow. Subsequently she started having two-monthly injections of progesterone (150 mg medroxyprogesterone acetate) resulting in partial control of symptoms. As the hormonal treatment was not completely successful in respect to the metrorrhagia, abdominal hysterectomy was indicated.

During the surgical procedure, apart from bilateral tubal sterilization, the presence of hydrosalpinx in the left tube was observed and so bilateral salpingectomy was performed. An anatomopathological examination of the surgical samples revealed uterine leiomyomas with multiple S. mansoni eggs being identified in the wall of the left tube, compatible with tubal schistosomiasis (Figures 1 and 2).

On the 29th postoperative day the patient reported having five to six episodes of diarrhea per day with liquid stools that had started 15 days after the procedure. In this consultation, based on the anatomopathological report and on the low socioeconomic condition of the patient, therapy with mebendazole at 200 mg/day for three days associated to 750 mg/day metronidazole for seven days was started with the objective of treating the most prevalent intestinal parasites. The patient was referred to the infectious and parasitic diseases department for treatment specific for schistosomiasis.

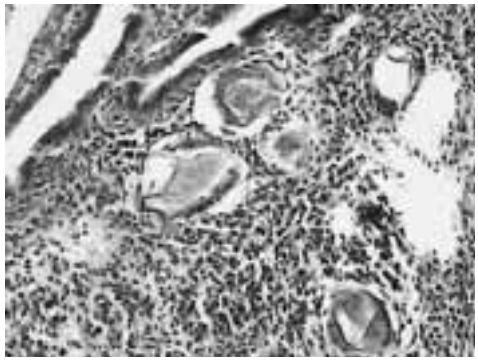

Figure 1 – Section of uterine tube and paratubal tissues showing a granulomatous reaction of Schistosoma mansoni eggs; (HE 100×).

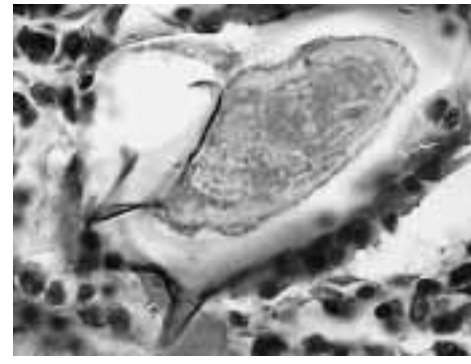

Figure 2 – The inset shows one egg with a lateral spine morphologically resembling Schistosoma mansoni; (HE 400×).

In a consultation with the infectious and parasitic diseases department in the 4th postoperative month, a continuation of the diarrhoea was reported. The results of a parasitological examination of the faeces and a faecal occult blood test were negative. oxaminiquine was prescribed at a single dose of 750 mg via oral, based on the clinical status of the patient.

After six months the patient returned reporting sporadic episodes of diarrhoea and a study of heavy eggs in the faeces was made. In the last return consultation, 15 months after the surgical procedure, the patient was asymptomatic, the result of the heavy egg examination was negative and outpatient treatment was ceased.

Discussion

Schistosomiasis of the female genital tract has been studied very little with scarce published clinical data and statistics available. It is estimated that the disease affects 25% of women with intestinal S. mansoni [4].

The vascular proximity of rectal and vesical plexuses to the female pelvic veins, as well as the frequent occurrence of small anastomoses between structures, seems to be the most probable mechanism for the migration of adult lavas to female genital organs [2, 4, 7]. Among the cases described in the literature, the commonest infection site of the female genital tract where Schistosoma eggs have been found is the uterine neck, followed by the uterine tubes, ovaries and the uterus [3, 4, 8].

The most frequent clinical manifestations found in women with genital infections are: metrorrhagia, dyspareunia, infertility and ectopic pregnancies, and in patients with topic gestations, miscarriages, premature labour and intrauterine growth restriction have also been cited [8–10]. Findings of case reports have shown associations of genital schistosomiasis with tubal carcinoma and cervical dysplasia. These articles suggested a casual relationship between the infection and findings however, due to the scarcity of studies, conclusions can not be made [11, 12].

The diagnostic methods to identify Schistosoma sp. eggs in genital organs are not very sensitive with the main diagnostic examination using samples collected by surgical resection or biopsies during the investigation or treatment of genital diseases. Treatment should be with schistosomicide drugs associated with surgical treatment when necessary according to the location and extent of the lesions [3, 13, 14].

Despite the few international publications, it is believed that schistosomiasis of the female genital tract has a higher prevalence in endemic areas than is reported [15]. Additionally, this disease should be remembered as a possible aetiology of common gynaecological complaints, including infertility and ectopic pregnancy, in particular in patients coming from endemic areas and tourists who visit these regions.

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