Intestinal schistosomiasis acquired in Cameroon: A case report.

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Citation

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Abstract

We present the case of a 32 year old man from Cameroon who was referred for “isolated eosinophilia”. The diagnosis of intestinal schistosomiasis was suspected upon epidemiological factors and a positive serology. It was confirmed by a rectum mucosa biopsy. Treatment with praziquantel was successful and post therapeutic controls tests were within normal limits.

CASE REPORT

The patient was born in Cameroon. He is 32 years old, married and has 2 children. He recently took a new job as clerk in a hospital in Paris, city where he has been living for 3 years without going back to Africa. He is referred for “isolated eosinophilia”, which was discovered in his pre-employment check up. In his family history his father died of myocardial infarction, in his surgical history he underwent an appendectomy when he was 12 and in his medical history he contracted typhoid fever at age 24. Currently, he is totally asymptomatic.

The tropical diseases check-up performed on consultation day reveals the following:

CBC: Eosinophilia (8% of WBCs)

Parasitological stool exam: Negative

Schistosomal serology: Positive (1/400 using indirect immunofluoresence)

Consequently, a rectum mucosa biopsy is requested, which shows living Schistosoma mansoni eggs. An oral treatment by praziquantel is given on an outpatient basis (a single dose of 40mg/kg). It is well tolerated clinically and biologically. Post therapeutic tests exhibit the following:

Figure 1

Time	*Eosinos./ WBCs*	*Serology*	*Rectal Biopsy*
Day 90	15%	1/1600	Dead Eggs (black)
Day 180	3%	1/400	Negative

DISCUSSION

Intestinal schistosomiasis is endemic in Cameroon where it co-exists with urinary schistosomiasis. Schistosoma mansoni is the only species in Brazil and the West Indies but it cannot be found in Cuba and Jamaica.

Generally, clinical symptoms are discreet or even absent. At the parasitic adult phase (about 3 months after contamination), they mainly consist of bowel movement disturbances and abdominal pain.

The degree of liver involvement depends upon the intensity of infestation. Ovulary emboli stopped at the hepatic level form bilharziomas made of a sclerosis in pipe tube shape, which is pathognomonic of schistosomiasis. It results in a pre-sinusoidal block causing portal hypertension.

The prognosis of intestinal schistosomiasis is linked to the hemorrhagic complications of portal hypertension in particular esophageal varicose veins rupture.

The diagnosis rests primarily on parasitological stools exams. However, when the parasitic load is weak they may be negative. In this case, if other indirect arguments are present (like in our presentation), a rectum mucosa biopsy is

a useful diagnostic tool.

Beside praziquantel, oxamniquine is also used in some countries to treat intestinal schistosomiasis.

In addition to Schistosoma mansoni, praziquantel is also efficient on Schistosoma haematobium, Schistosoma japonicum, Schistosoma intercalatum and Schistosoma mekongi.

The usual biological evolution post treatment is as follows:

- Rectum mucosa biopsy (RMB): Living eggs disappear within 60 to 60 days (one month after therapy living eggs can still be encountered).

- Parasitological stool exam: Similar to RMB. When it is positive, controls must be performed around day 30, 60, 90 and 360.

- Eosinophil/WBC ratio: Numbers climb progressively to reach an apex within 30 to 45 days and return to normal limits in several months

- Serology: Parallel to the eosinophil ratio but negativity happens much slower and sometimes it is never obtained, which by no way means that treatment was not successful.

Prevention of intestinal schistosomiasis is possible at 2 levels:

1- Collective: It relies upon (a) Eliminating intermediary hosts (planorb snails) by diverse means, chemical (copper or tin derivates), biological (fish, bacteria, viruses) or ecological (iterative drying of water bodies), (b) Mass treatment with antischistosomal drugs, which can be costly to developing countries and faces serious obstacles such as migrant populations (in particular, workers) re-introducing the disease in their country of origin and an animal reservoir (rodents), which perpetuates the parasitic cycle and (c) Sanitary education teaching fecal hygiene and promoting awareness of risks linked to infested waters

2- Individual: Avoiding bathing or swimming in waters infested with cercariae. No chemoprophylaxis is available against schistosomiasis.

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