

CASE REPORT

Schistosomiasis mansoni

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ABSTRACT

The case report of a 10 years patient is presented who attended Santa Johana doctor's office, Itamarandiba municipality, Minas Gerais Brazilian state, accompanied by his mother, due to abdominal pain of colic type, with diarrhea mixed with blood and loss of appetite, also a light mucocutaneous paleness, which corresponded to a schistosomiasis mansoni. The pertinent examinations were carried out and the appropriate treatment was indicated, so that the boy had a favorable clinical course.

Key words: child, schistosomiasis mansoni, parasitic disease, polluted water, Brazil.

INTRODUCTION

Schistosomiasis (formerly called bilharziasis or bilharziosis), is a disease caused by helminth parasites of the trematodes type, gender *Schistosoma* (*esquistosoma* in Spanish). There are 5 species of this parasite causing squistosomiasis in humans, each one with their respective clinical manifestations: *Schistosoma mansoni*, *Schistosoma intercalatum*, *Schistosoma haematobium*, *Schistosoma japonicum* and *Schistosoma mekongi*.¹

On the other hand, schistosomiasis is also among the hydric origin disorders or due to the adverse effects of water on the human health, if one keeps in mind that the infection takes place through the contact with contaminated water with the eggs of schistosomes.¹

This disease is mainly a parasitosis in rural and marginal areas, with little environmental cleaning up and precarious social and economic conditions. In the developing countries, the most common infection ways is through the bathing in lakes and infested ponds with the snails that are specifically natural reservoir of the schistosomes.^{1,2}

Of all the parasitic infections affecting man, schistosomiasis is among those mostly diffused infections, present in more than 74 countries, where more than 200 million people are contaminated every year and they leave among 500-600 millions exposed to the disease.³⁻⁵

In Brazil the schistosomiasis mansoni prevails which causal agent is the trematode *Schistosoma mansoni* (*S. mansoni*). The dissemination of this spread is slow and progressive and is given by the precarious and nonexistent cleaning up; also, it can

persist for many years in the human host and the age of higher incidence is the pre-adolescent age, mainly in the male sex. Mine Gerais is one of the states that historically has the highest number of schistosomiasis sources, although they have begun to decrease thanks to the different actions carried out by the Ministry of Health.^{4,5}

The transmission takes place when people with schistosomiasis contaminate sources of fresh water with eggs of the parasite contained in their stools, which then are incubated in the water, so that the larvae forms of the parasite, liberated by snails of fresh water, penetrate in the skin during the contact with infested waters.⁵

The symptoms of the schistosomiasis are related to the reaction from the organism to the eggs of the worm and not with the worm itself. That of intestinal type can cause abdominal pain, diarrhea and blood in the stools; however, in advanced phase it is frequent the hepatomegaly, which can be associate with ascitis and portal hypertension, although splenomegaly may also be presents.¹⁻³

The certain and opportune diagnosis of the disease in exposed people, in particular, in endemic areas and of high risk, is important from the sanitary and therapeutic point of view for the worldwide control of schistosomiasis.^{6,7}

On the other hand, the clinical and epidemiological diagnosis is guided with the interview, to deduce the possible contact with water of endemic areas or of high risk. Other diseases, as that of Chagas and leishmaniasis can coincide with affected areas with Schistosoma.

CASE REPORT

The case report of a 10 year-old patient is presented who attended the health post of Santa Johana, municipality of Itamarandiba, Brazilian state of Mines Gerais, accompanied by his mother, due to abdominal pain of colic type, with diarrheic stools with blood, besides loss of appetite and slight cutaneous mucous paleness. During the interview the mother referred that the boy took a bath in a river near his house and he drank unboiled water, extracted from a well.

Physical examination

- Mucous: hypocoloured and humid mucous membranes.
- Abdomen: plane, soft, that followed the breathing movements and lightly painful during superficial palpation in epigastrium.
- Weight: 29 kg; height: 129 cm; IMC: 17.43 (considered under weight).

Laboratory tests

- Complete hemogram: hemoglobine: 9.5 g/L
- Eosinophils: 11 %
- Urine: leukocytes: 5-6 by field; hematíes: 0-1 by field. Scarce epithelium.
- Stools: abundant schistosoma eggs.
- Abdominal Echography: normal liver, kidneys and stomach.
- Intracutaneous reaction for schistosoma: positive.

The case was confirmed and he began to be treated with a wide-spectrum antiparasite (praziquantel of 600 mg), at a dose of 60 mg/kg (unique dose), supplemented with iron salts, folic acid and vitamin C, with which he had a favorable clinical course.

After 3 months of treatment, by means of the complementary tests, the absence of the parasite was notified; also, the levels of eosinophils and hemoglobin were normal. It was emphasized in the educational and control activities, either with the family or with the community, due to their preventive value in the primary health care.

COMMENTS

Among the clinical manifestations of schistosomiasis, in its acute stage, there are: diarrhea with or without blood, abdominal pain and no appetite. Although these symptoms are unspecific and this parasitosis is generally asymptomatic, the environmental factor related to the water quality constitutes an important cause of infection.⁶

Most of people who live in endemic regions of *S. mansoni* are contaminated during childhood and they remain with the parasite in their digestive system, quietly, during many years. Sometimes, the initial symptoms are not very important and they are usually confused with some common diseases from the childhood.⁷⁻¹⁰

When assisting a patient with the indicated symptoms, who comes from a rural area considered an endemic area for schistosomiasis, especially if he has exposed his skin to lakes of fresh water and rivers, the presence of this disease should be suspected, as it happened with the case described.

Keeping in mind that the symptoms of schistosomiasis resemble to those of the serum disease, among other affections, it is required to carried out the exams of stools and of urine concentration to determine the presence or absence of some eggs of *S. mansoni*.^{9,10}

The early antiparasite treatment, mainly in the acute schistosomiasis, allows the patients to recover completely, without developing a chronic disease; however, the prognosis is worse for those who already present other health problems (the virus of human immunodeficiency, malaria, among others) and a weakened immune system.⁸⁻¹⁰

To prevent this disease, the first thing to do is to avoid all contact with the sources of fresh water, where schistosomiasis and the snails which complete their life cycle are endemic, although this is not very probable that happens in most of the developing countries.

According to the reports, with the attempts to reduce or eliminate the snails of some sources of fresh water with the moluscicides (snail bait), the number of infected people has decreased, but it is required to repeat the procedure with more frequency; other efforts with these aims have been stopped due to their limited success.^{8,9}

Unfortunately, people who are treated and don't have symptoms of the disease, can be infected again if they are exposed to polluted waters, because often the immune human response to this disease, can not prevent the reinfection. At the moment vaccines against *S. mansoni* have not been marketed, but the investigation is being carried out and perhaps it can be disposable within some years.^{8,9}

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