Schistosoma mansoni Infestation:  
An Imported Case of a Japanese Patient

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(Received: March 5, 1996)  
(Accepted: April 4, 1996)

Key words: Schistosoma mansoni, schistosomiasis, praziquantel

Abstract

A 25-year-old male Japanese who had resided in Ethiopia, presented to our department with eosinophilia, which had been present for about 1 year. Stool examination revealed eggs of Schistosoma mansoni containing miracidia with flame cell activity, and he was diagnosed as having an infestation with this organism. He was treated with praziquantel, and a good parasitological therapeutic result was obtained. Although schistosomiasis mansoni is unfamiliar to Japanese doctors because the infecting organisms are not indigenous to Japan, doctors should be aware of this disease when they encounter patients with eosinophilia who have visited or resided in tropical developing countries.

Introduction

Infestation with Schistosoma mansoni is common in certain countries in Africa, Southwest Asia, the Caribbean, and South America. To our knowledge, only 3 Japanese patients with this disease have been reported in Japan, all of which contracted it outside of Japan. Recently we treated a Japanese patient with S. mansoni infestation, who presented with eosinophilia after having returned from Africa. The purpose of this report is to emphasize the importance of parasitological investigation for patients with eosinophilia who have visited or resided in tropical developing countries.

Case Report

A 25-year-old male Japanese postgraduate student stayed in southwestern Ethiopia, in connection with a socioanthropological study, beginning in February 1993. He swam in a local river during the summer and autumn of 1993, and in February 1994. At the end of March 1994, he developed fever and diarrhea, and subsequently he was hospitalized in Ethiopia on April 23. The cause of his symptoms was not diagnosed, but he was treated with chloroquine, chloramphenicol, tetracycline, metronidazole, and other drugs unknown to us. Diarrhea stopped in early May, but fever continued. He was discharged from the hospital on May 7, 1994, but he continued to have low-grade fever.

He returned to Japan on May 15, 1994, and visited a hospital in Tokyo on May 17, 1994 because of his fever. He was found to have eosinophilia, but the cause of his fever and eosinophilia was not determined. His fever stopped at the end of May; he subsequently visited the same hospital, on May 27, June 21, and October 7, 1994, in connection with his eosinophilia, but its cause remained unknown.

He visited our hospital on May 15, 1995. Physical examination revealed no abnormal findings. Chest X-ray was normal, and abdominal ultrasonography revealed splenomegaly, but no liver

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abnormality. His blood count and serum biochemical tests were normal, except for the eosinophil count which was 1,660/mm³ (WBC 8,300/mm³; 20% eosinophils), as tested on May 15, 1995. Tests for red blood cells and eggs in the urine were negative. Stool examination by direct smear technique revealed eggs of *S. mansoni* (Fig.) containing miracidia with flame cell activity. No other parasitic eggs were found by both direct smear and formalin ether sedimentation techniques.

He was diagnosed as having *S. mansoni* infestation, and he was treated with two 20 mg/kg doses of praziquantel given four hours apart, on May 23, 1995. At one and two hours after the first drug treatment, abdominal pain, nausea, and watery diarrhea occurred, respectively. Sixteen hours after the first drug treatment his diarrhea stopped, but he was febrile at about 39°C and he was treated with an antipyretic. The fever lasted about 1 day, and his nausea and abdominal pain lasted about 2 days. Stool examination on May 29 revealed eggs of *S. mansoni*, but none were found on subsequent examinations done on June 8, June 15, and June 22, 1995.

**Discussion**

Worldwide, about 200 million people are infected with *Schistosoma* species⁹, and schistosomiasis is well-known to doctors in endemic areas. Schistosomiasis mansoni is not present in Japan and this condition is unfamiliar to Japanese doctors. This unfamiliarity may be the reason this patient’s disease was not correctly diagnosed for a long time. The presence of eosinophilia led us to make a parasitological stool examination, which resulted in the correct diagnosis. Parasitic infection is a well-known cause of eosinophilia, and doctors should consider such disease when they encounter patients with eosinophilia who have visited or stayed in tropical or subtropical developing countries. Many Japanese have traveled or stayed in *S. mansoni*-endemic areas and have come into contact with river or pond water, but few cases of schistosomiasis mansoni infestation have been reported in Japanese patients. It may be that many patients with this disease have been incorrectly diagnosed because of unfamiliarity with this disease. The number of Japanese contracting schistosomiasis mansoni will increase as more people travel to *S. mansoni*-endemic areas.

Approximately 4 to 6 weeks after initial infection with *Schistosoma* species, acute systemic schistosomiasis, also called Katayama fever, occurs⁹. The fever and diarrhea that our patient developed in late March 1994 may have been symptoms of acute schistosomiasis, resulting from his having been infected while swimming in February 1994.

Fever, watery diarrhea, nausea, and abdominal pain appeared after administration of praziquantel in our patient, and they were severe. These symptoms have been observed after praziquantel administration for schistosomiasis, but their degree has only previously been reported to be mild or moderate⁹. The severity of reactions seen in our patient may have been due to a high load of infecting organisms, but further studies would be required to confirm this.
Acknowledgements

We are grateful to Dr. Y. Aoki, Department of Parasitology, Institute of Tropical Medicine, Nagasaki University; and Drs. M. Iseki and S. Takada, Department of Medical Zoology, Osaka City University Medical School, for information on the present situation of schistosomiasis mansoni in Japan; and Dr. M. Tanabe, Department of Tropical Medicine and Parasitology, School of Medicine, Keio University, for information on the present situation of schistosomiasis in the world.

References


マンソン住血吸虫症: 日本人輸入感染の1例

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要 旨

25歳の日本人男性が学術調査目的でエチオピアに滞在中に、発熱、下痢のため現地の病院に入院した。原因不明であったが症状出現後2カ月で軽快し帰国した。帰国後に他院で末梢血の好酸球増多を指摘されたがその原因は不明であった。帰国約1年後に精査目的で当院を受診したところ、末梢血の好酸球増加を認めさらに便からマンソン住血吸虫卵を検出した。マンソン住血吸虫症と診断し、プラジカンテルの経口投与で治療した。マンソン住血吸虫症は日本国内には存在しないため、その感染症は日本人医師にはなじみの薄い疾患であるが、熱帯から帰国し好酸球増加を認める患者では本疾患も含めた寄生虫感染症を考慮する必要がある。