A Rare Case of *Schistosoma haematobium* Infection Found in Jakarta

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Abstrak

Sebuah kasus impor skistosomiasis haematobium telah ditemukan di Jakarta pada seorang wanita berkebangsaan Belanda (pendatang dari Sittard) berumur 23 tahun. Ia mempunyai keluhan infeksi kandung kemih seperti disuri dan hematuri yang telah dideritanya selama 2 bulan sebelum pemeriksaan laboratorium. Pada pemeriksaan urin, menunjukkan sel leukosit dan eritrosit dalam jumlah besar dan banyak telur Schistosoma haematobium. Tinjanya juga positif dengan telur Schistosoma haematobium. Penderita diobati dengan prazikuantel dan dilanjutkan dengan pemberian kapsul tiamfenikol hydroksimetilnitrofurantoin untuk infeksi bakteri di dalam saluran kencing. Penderita berhasil sembuh setelah satu bulan diperiksa kembali. Diduga sangat mungkin ia memperoleh infeksi di Afrika dalam perjalanan sebelumnya.

Absract

One imported case of Schistosomiasis haematobium was found in Jakarta in a female Dutch (visitor, from Sittard resident) 23 years of age. She had been suffering from a presumed bladder infection with dysuria and haematuria 2 months prior to examination. Examination of her urine revealed large numbers of leucocytes and erythrocytes and many Schistosoma haematobium eggs. Her stools were also positive for S. haematobium eggs. The patient was treated with praziquantel followed by thiamphenicol and hydroxymethyl-nitrofurantoin for concurrent bacterial urinary tract infection. The patient was cured at a one month follow up visit. It is assumed that she acquired her infection in Africa on previous travel.

Keywords: *Schistosomiasis haematobium, urinary tract infection, praziquantel*

INTRODUCTION

Schistosomiasis is a disease mainly found in developing countries and is caused by three important species namely: *Schistosoma haematobium, S. mansoni and S. japonicum. S. haematobium* is reported as a public health problem in Africa, and the Middle East; *S. mansoni* in Africa and South America; and *S. japonicum* in Asia, including Indonesia.

There are two endemic foci of *S. japonicum* in Indonesia: the Lindu Lake area and Napu valley. Both sites are located in Central Sulawesi. In Indonesia, the first locally acquired case was reported by Muller & Tesch[1] in 1937 in Palu, Central Sulawesi, followed by the discovery of the endemic focus at Lindu lake area.[2] Outside the mentioned endemic foci, only one case of suspected *Schistosoma japonicum* infection was reported in a Jakarta man, who might have possibly acquired his infection in Central Kalimantan.[3]

There have been three prior imported cases of *Schistosoma haematobium* infection reported in Indonesia. The first case was reported by Bonne in 1929,[4] followed by the second case in 1931[5] and the third case was reported in 1935 by the *Dienst der volksgezondheid in Nederlandsch-Indie*.[6] This report documents the fourth imported case found in Indonesia.

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CASE REPORT

A 23 year-old Dutch woman was referred to the Department of Parasitology, Faculty of Medicine, University of Indonesia, by a physician from the Gatot Subroto Army Hospital on noting what appeared to be parasite eggs in her urine. The patient's symptoms began in February, 1994, two months after visiting Indonesia. Initially she noted mild dysuria but no other symptoms. In the middle of March her symptoms became more exaggerated with severe dysuria and haematuria and she was presented for treatment.

She reported in her history that in August, 1993, she visited Malawi in Africa, and swam daily in Lake Malawi for 10 days. In addition, she swam in the Cariba lake in Zimbabwe. She never noted any skin irritation or infection after her swims or visit to Africa.

Physical examination revealed an excellent general condition and a body weight of 64 kg. She looked healthy but a little tired. Her blood pressure was 120/80, pulse rate 64/minute. Body temperature was 36,9 degree Centigrade. The heart and lungs were normal. There were no enlargement and tenderness of the liver and spleen. There was only a slight tenderness in the suprapubic region.

Examination of the urine revealed epithelial cells, leucocytes and erythrocytes in large numbers and many S. haematobium eggs (Figs. 1 and 2).

Blood examination showed the following results: Haemoglobin was 12.1 g/dl, haematocrit 34 vol%, reticulocytes 0,6%, thrombocytes 30003,000/micro-liter, white blood count was 6,400/micro-liter, BSR: 5 mm/hour (Westergren); differential count: basophils 2%, eosinophils 3%, rod-like neutrophils 2%, segmented neutrophils 55%, lymphocytes 36% and monocytes 2%. Liver function tests were as follows: SGPT 63 U/I, SGOT 31 U/I, Gamma GT 15 U/I. Uric acid 5.9 mg/dl, total bilirubin 0,8 mg/dl, total protein 7.3 g/dl, albumin 4.4 and globulin 2.9 g/dl. Blood urea nitrogen was 20 mg/dl and creatinine 1.0 mg/dl.

Treatment was based on the results of urine examination. For the treatment of schistosomiasis, praziquantel was given at a dosage of 40 mg per kg body weight in two divided doses for one day. For the secondary bacterial urinary tract infection, a combination of thiamphenicol 500 mg given three times daily and hydroxymethylnitrofurantoin 40 mg given four times daily was continued for 5 days. No side effects were observed and the patient was found to be free of signs and symptoms one month after treatment, and in addition examinations of the 24 hours urine and stool did not reveal any eggs of *S. haematobium*. Follow up examinations of urine and stool will be done 2 and 3 months after treatment.

DISCUSSION

Schistosoma haematobium infection or "bladder bilharziasis" is a disease found in Africa and the Middle East. This disease is rarely reported in Indonesia. Our case is the fourth ever reported. It is likely that the patient probably acquired her infection in August, 1993, during the time she was in Africa, while swimming in Malawi and Cariba lakes.

Symptoms began in this patient six months after the presumed infection occured and began with a hot feeling in the urethra during urination, followed later by more severe dysuria and haematuria. Liver function tests showed a slight elevation of SGPT which might be related to changes in the liver cells caused by schistosome eggs and adult worms which might migrate through the liver.

Treatment with praziquantel, the drug of choice for schistosome infections, resulted in a cure of the patient after one month after treatment, based on the disappearance of signs and symptoms, and the result of laboratory examination restored to normal.

In general *S. haematobium* is a mild infection which is usually symptomless or manifests itself by recurrent painless haematuria. Among people living in an endemic area in Africa almost all children are infected at an early stage and macroscopic haematuria is common and microscopic haematuria almost universal. In some cases, however, complications develop with chronic renal infection, bladder abnormalities and carcinoma.

Therefore treatment with praziquantel was given earlier before the development of chronic renal infection or bladder abnormalities. Praziquantel is the drug of choice for schistosomiasis. It was used for the treatment of schistosomiasis japonicum in endemic areas of Lindu Lake and Napu valley at Palu, Indonesia, as a part of control measures.

According to Hadidjaja[7] clinical presentation of *Schistosoma japonicum* infection in endemic areas of Lindu Lake and Napu valley revealed initially dermatitis caused by the cercarial invasion, which includes migration and development of the schistosomules and was followed by signs and symptoms caused by the adult worms and eggs which consisted of fever, diarrhea, dysentry, abdominal pain, weakness, distension of the abdomen, melena, hepatomegaly and splenomegaly. The disease was ussually chronic in nature which could end up with cirrhosis of the liver.

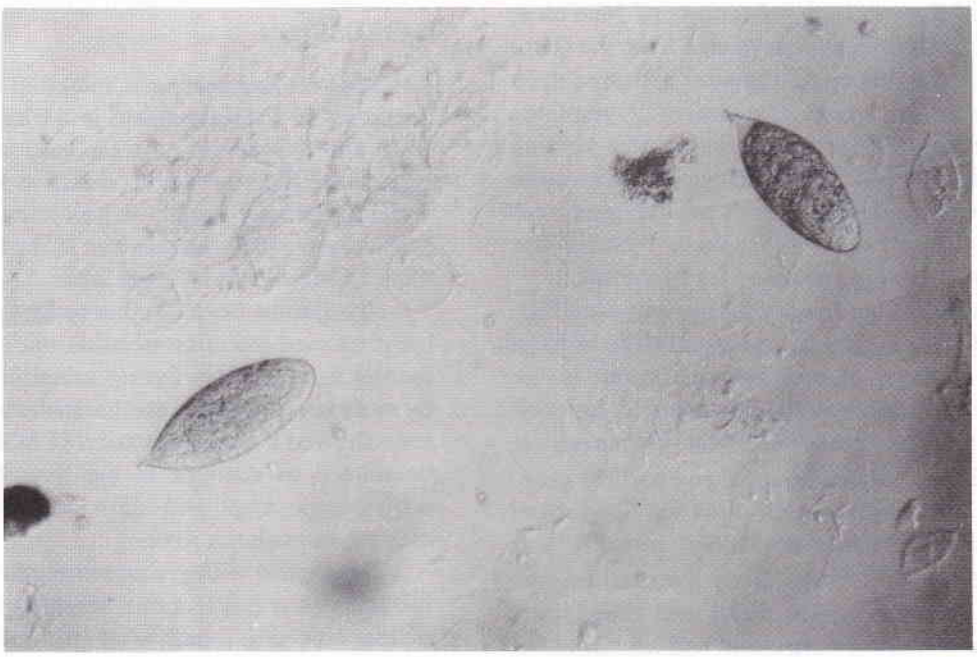

Fig. 1. S. haematobium egg and epithelial cells.

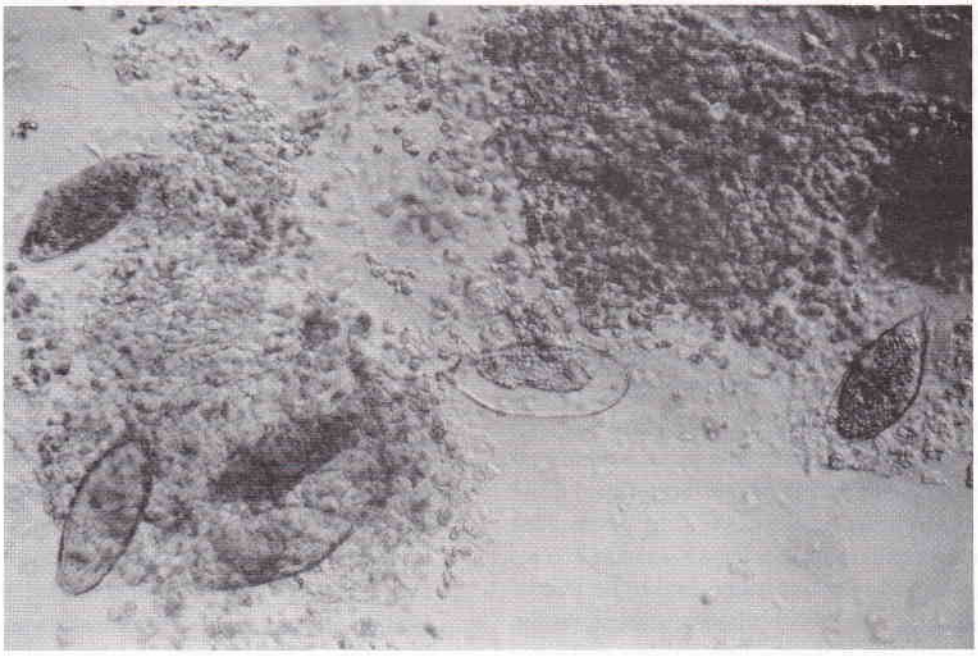

Fig. 2. S. haematobium eggs with leucocytes and erithrocytes

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