Acute schistosomiasis (Katayama fever) among British air crew

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Even brief visits abroad may bring travellers into contact with pathogens against which they have no immunity. Though returning home apparently well, the travellers may be incubating an exotic illness with which they then present to their local doctor. We report a recent outbreak of acute *Schistosoma mansoni* infection that occurred in this way.

Case reports

During an off duty weekend in Ghana 14 British men and women who were members of an air crew picnicked on an island in the estuary of the Volta. Ten of them swam in the fresh water, of whom two recalled itching afterwards. Eight became ill two to five weeks later with fever, rigors, and malaise and various other symptoms including cough, weight loss, myalgia, arthralgia, and urticaria. The remaining two

Laboratory findings in 10 people who swam in water in Ghana

Age (years)	Eosinophil count ($\times 10^9/l$)	Stool findings	Findings in rectal snips	ELISA value*
41	444	Men		
41†	557	Negative	<i>S mansoni</i>	3
				6
		Women		
39		<i>S mansoni</i>		2
25†	1580			4
24	3780		<i>S mansoni</i>	5
26	3024	Negative	Negative	3
25	730	<i>S mansoni</i>	<i>S mansoni</i>	
25	476	<i>S mansoni</i>		4
27	996	Negative	Negative	5
24	1005	Negative	Negative	2

ELISA = Enzyme linked immunosorbent assay.

*Expressed as multiple of upper limit of normal.

†Had previously swum at the site.

people did not have any symptoms, though one had had a swimmers' itch a few minutes after swimming; these were the only two crew members who had previously swum at this site. Clinical findings were unremarkable, and most of the crew had begun to improve spontaneously by the time they were examined, which was one to two weeks after the onset of symptoms. The table gives the laboratory findings in all 10 swimmers.

Ova of *S mansoni* were found in the stools or snips of

rectal mucosa in five cases; schistosomiasis was diagnosed in the others after eosinophilia was detected and serological examination yielded positive results. All patients were initially screened serologically with a commercially available complement fixation test, which gave negative results in all cases. Serological testing was repeated two to three weeks later at the Hospital for Tropical Diseases with an enzyme linked immunosorbent assay (ELISA). The table gives the results of this assay as multiples of the upper limit of normal, and the positive predictive value for each multiple is known.¹

The duration and severity of symptoms in the eight patients with Katayama fever varied. Most were grounded and were ill for three to four weeks. All 10 patients were treated with praziquantel 40 mg/kg body weight orally, and several reported an exacerbation of their symptoms over the next 36 hours. A second dose was given to seven patients one month later, which did not have any adverse effects. Subsequently all the patients recovered fully.

Comment

Acute schistosomiasis may be severe, debilitating, and even fatal and usually arises three to six weeks after primary infection by the cercariae of *S mansoni*, *S japonicum*, or, occasionally, *S haematobium*.² During the illness the parasites mature, mate, migrate to the portal venous system, and begin to lay eggs and the patient becomes positive for schistosomal antibodies. Early diagnosis is difficult because at that stage so few eggs have been laid that they cannot be detected in clinical specimens. The ELISA for antibodies to schistosomes has a high sensitivity and specificity³ and is a valuable screening test provided sufficient time for seroconversion has elapsed.

The treatment of Katayama fever may result in clinical deterioration due to hypersensitivity or a condition similar to serum sickness. For this reason some authors suggest that patients should also be given corticosteroids.³ The parasite is highly infectious and may cause extensive morbidity in those who are not immune to it.^{4,5} Schistosomiasis should be suspected in any patient who has been in contact with fresh water in an endemic area.

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4 Zuidema PJ. The Katayama syndrome: an outbreak in Dutch tourists to the Omo National Park, Ethiopia. *Trop Geogr Med* 1981;33:30-5.

5 Gras C, Martet G, Renoux E, Lecamus JL, Aubry P. Une épidémie de bilharziose à *Schistosoma mansoni*. *Rev Med Interne* 1987;8:379-82.

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Restless leg syndrome in pregnancy

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The restless leg syndrome is an unpleasant creeping sensation deep in the lower legs causing an irresistible desire to move the leg and relieve the sensation.¹ Though there are no proved aetiological factors,² the syndrome seems to be strongly associated with pregnancy, iron deficiency anaemia, uraemia, and rheumatoid arthritis.³ We assessed the prevalence and outcome of the syndrome in pregnancy.

Patients, methods, and results

Five hundred women with singleton pregnancies at 32-34 weeks' gestation consecutively attending this hospital's antenatal clinics were invited to complete a questionnaire and were interviewed by JDSG. Four weeks after delivery those women who had had the restless leg syndrome were contacted by telephone or post and asked whether their symptoms had improved or cleared.

Ninety seven women were assessed as having the restless leg syndrome. In 16 the symptoms had predated their pregnancy, and five of these reported that their symptoms became worse in the third trimester but after delivery returned to the same as before pregnancy. We were unable to contact four women. In women with more than one child 30% of those patients