granulomas provide further evidence that the kidney granulomas in our patient were a manifestation of his Crohn's disease.

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Post-tropical screening: how useful is it?

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Travellers to the tropics worry about catching "tropical" diseases. Those who live in the tropics for a while think they are at more risk than are short term visitors. Many believe, as do their doctors, that medical screening on return to the United Kingdom, even in asymptomatic individuals, will reveal conditions which could or should be treated. This study examines the usefulness of screening asymptomatic individuals who have returned from the tropics.

Methods and results

In 1991 at the Hospital for Tropical Diseases 1029 asymptomatic individuals presenting consecutively who had recently returned from the tropics were examined using a standard protocol comprising a questionnaire, a physical examination by a tropical medicine specialist, and a range (determined by the area visited) of laboratory tests. The subjects either worked for the Foreign and Commonwealth Office, the Overseas Development Administration, Voluntary Services Overseas, or the British Council or were trekkers. The subjects covered a wide range of ages (8 months-73 years), with 135 (13·1%) being under 14 years. Length of stay abroad ranged from three months to 45 years. Both sexes were represented equally. Most had been in sub-Saharan Africa, but all tropical areas of the world were represented.

Full blood count with white cell differential and stool microscopy for cysts, ova, and parasites were performed routinely, as was urine analysis by dipstick. Schistosomal and filarial serology was performed only if the questionnaire suggested the individual had been at risk. Additional tests were done where thought necessary.

Overall one in four of those screened had an abnormal result (see table). Urine analysis gave 116 abnormalities in 830 cases (14%). When followed up none of these abnormalities proved to be conditions resulting from life in the tropics. Stool microscopy for cysts, ova, and parasites showed abnormalities in 207 of 995 patients who were able to produce specimens (18·7%). The results were unaffected by area of travel or any other variable. The commonest abnormal finding was of cysts of *Entamoeba histolytica* or *Giardia lamblia*. Practically all these individuals were treated, despite being asymptomatic. Full blood count showed eosinophilia in 67 out of 852 samples (16·1%). In 26 people this was associated with parasitosis. Only one other blood count abnormality was of tropical origin, a case of post-diarrhoeal malabsorption. Schistosomal serology was positive in 72 out of 676 tests (10·7%). Positive results, more significant if associated with eosinophilia, were followed up and individuals treated when necessary. Thirteen positive results were obtained in enzyme linked immunosorbent assays for filaria, one of which was associated with detectable disease (onchocerciasis).

Abnormal findings on screening asymptomatic people returned from tropical areas

Investigations and findings	No
	of pathogens
Stool microscopy:	
Helminths	33
Trichuris trichiura ova	14
Ascaris lumbricoides ova	12
Hookworm ova and larvae	3
Schistosoma mansoni ova	2
Threadworm ova	1
Strongyloides larvae	1
Protozoa	174
Entamoeba histolytica cysts	115
Giarda lamblia cysts	39
Blastocystis hominis cysts	16
Dientamoeba fragilis trophozoites	4
	of people
Urine analysis	116
Albuminuria	58
Haematuria	33
Haematuria and albuminuria	10
Ketonuria	6
Glycosuria	4
Albuminuria and biliuria	2
Albuminuria and glycosuria	1
Ketonuria and haematuria	1
Albuminuria and ketonuria	1
Parasitosis in people with eosinophilia	26
Schistosomiasis	17
Schistosomiasis and filariasis	1
Filariasis	2
Hookworm infection	2
Strongyloidiasis	1
Hookworm infection and strongyloidiasis	1
Trichuriasis	2

Physical examination by a tropical medicine specialist produced 387 abnormal findings, of which 108 were skin problems. Other findings reflected "non-tropical" diseases such as hypertension and obesity. The only specific tropical conditions diagnosed by specialist examination were one case of cutaneous larva migrans and two cases of splenomegaly, attributed to past malaria. The additional tests requested by the doctors produced few abnormal important results and did not prompt changes in management.

Comment

Screening of asymptomatic individuals returning from the tropics identified abnormalities in one in four. Most of these abnormalities were revealed by laboratory tests, some guided by answers to direct questions. They were performed in a specialist laboratory which would expect a high rate of positive findings.[1] Specialist physical examination of all patients added little to the practical management of these patients and thus can be limited to those considered to be at particular risk—for example, because of a history of malaria. Screening for tropical disease can be efficiently carried out by an informed health professional using structured history taking and relevant laboratory tests.

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