

Health Status of Ethiopian Refugees in the United States

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Abstract: The health status of 239 Ethiopian refugees in the United States was evaluated. Over 70 per cent were males 15–30 years old. Positive PPDs (purified protein derivative of tuberculin) were observed in 72 per cent and 3.4 per cent had abnormal chest x-rays. One patient had active tuberculosis. Other laboratory abnormalities included: intestinal parasites (36.7 per cent), anemia (14.9 per cent), eosinophilia (14 per cent), positive syphilis serology (7.5 per cent), and hepatitis B surface antigenemia (9.4 per cent). The most prevalent intestinal parasites were *Giardia lamblia*, *Trichuris trichiura*, and *Schistosoma mansoni*. (*Am J Public Health* 1987; 77:1542–1543.)

Introduction

In the United States, recent attention has been focused on refugees from Southeast Asia and Latin America, but little attention has been directed at other refugee groups. Over 8,000 Ethiopian refugees have immigrated to the United States since 1982.* Immigration has not been highly organized nor have there been screening or immunization programs prior to entry. A review of the health status of Ethiopian refugees presenting to two public health clinics reflects a spectrum of tropical and non-tropical diseases.

Methods

Ethiopian refugees were evaluated in two outpatient clinics, the Brighton Marine Public Health Clinic (BMPHC), Brighton, Massachusetts, and the Columbia Health Center (CHC), Washington, DC. The BMPHC has 67,000 clinic visits annually and approximately 18 per cent are immigrants. Between October 1980 and October 1984, 62 Ethiopian refugees were seen. Patients were evaluated either by retrospective chart review or prospectively (after April 1983). The CHC has 17,000 clinic visits annually and approximately 55 per cent are immigrants. Between June 1983 and July 1984, 177 Ethiopian immigrants were seen, and were evaluated by retrospective chart review. All patients seen at BMPHC and CHC were referred for routine evaluation.

Medical evaluation at both clinics included a history and physical examination, hematocrit, RPR** (positive results confirmed with FTA-abs*** or MHA†), tuberculin test (PPD, ‡ 5TU), and urinalysis. A stool examination for ova and parasites using a concentration method was performed. PPD positive individuals were evaluated by chest x-ray examination. Evaluation at the BMPHC also included white blood cell count with differential and serologic testing for hepatitis B

*Personal Communication, US Immigration and Naturalization Service

**Rapid Plasma Reagin test for syphilis

***fluorescent Treponema antibody absorbion test

†microhemagglutination test

‡purified protein derivative (of tuberculin)

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TABLE 1—Age and Sex of Ethiopian Refugees

Age (years)	Number		% Total
	Male	Female	
0–15	18	17	15
16–30	128	41	71
31–55	29	4	14
Total	177(74%)	62(26%)	

surface antigen (HB_sAg). An ophthalmologist performed random vision screening examinations in 34 patients.

Anemia is defined as a hematocrit of less than 42 for men and less than 36 for women, and eosinophilia as ≥ 750 eosinophils/mm³ as determined by CBC.†††

Results

Patients were generally well nourished and in a good state of health. The majority were males in the 15–30 age group (Table 1). Patients had been residing in the United States a median of 20 days before seeking medical attention.

A positive PPD was observed in 71.9 per cent (Table 2). Four of 118 patients (3.4 per cent) demonstrated abnormalities on chest x-ray and one had active tuberculosis. The *Mycobacterium tuberculosis* isolate was resistant to isoniazid (INH), but sensitive to rifampin and ethambutol. A positive test for syphilis was found in 7.5 per cent. HB_sAg was detected in 9.4 per cent of those tested. Hepatitis B surface antibody was not determined. Two patients had hematuria with normal intravenous pyelograms. Concentrated urine was not examined for ova.

Intestinal parasites were demonstrated in 36.7 per cent of the Ethiopian refugees. Of these, 26.2 per cent had one parasite in their stool, and 10.5 per cent had two or more. The most prevalent isolates were *Giardia lamblia* (11.5 per cent), *Trichuris trichiura* (4.2 per cent), and *Schistosoma mansoni* (4.2 per cent). One patient had recrudescing *Plasmodium vivax* malaria. Other medical problems in this population included tinea versicolor (six patients), healed trachoma (five patients), euthyroid goiter (three patients), tinea cruris (two patients), and pediculosis (two patients).

Discussion

The medical illnesses of Ethiopian refugees include those found in both developed and developing countries and are similar to those of other refugee groups.^{1–6} The majority

TABLE 2—Laboratory Findings in Ethiopian Refugees

Lab Findings	No. Patients/ Total No. Tested	%
Positive tuberculin test	146/203	71.9
Abnormal chest x-ray	4/118	3.4
Stool parasites found	70/191	36.7
Anemia	34/230	14.9
Eosinophilia	8/57	14.0
Positive syphilis serology	13/174	7.5
Positive hepatitis B surface antigen	5/53	9.4

†††complete blood count

TABLE 3—Prevalence of Intestinal Parasites in Ethiopian Refugees (n = 191)

	Total	
	N	%
Hemlminths		
<i>Trichuris trichiura</i>	8	4.2
<i>Schistosoma mansoni</i>	8	4.2
hookworm	7	3.7
<i>Hymenolepis nana</i>	7	3.7
<i>Stroglyoides stercoralis</i>	4	2.1
<i>Ascaris lumbricoides</i>	2	1.1
<i>Taenia solium</i>	1	0.5
Protozoa		
<i>Giardia lamblia</i>	22	11.5
<i>Entamoeba histolytica</i>	3	1.6
"Nonpathogenic amebae"	37	19.4

were in a good state of health and nutrition as evidenced by the relatively low prevalence of anemia and the presence of skin test reactivity. This is in contrast to the malnutrition noted in Ethiopian refugees in Somali refugees camps.⁷ The rate of tuberculin positivity (71.9 per cent) is consistent with skin test surveys done in isolated areas of Ethiopia and reflects the 1 per cent prevalence of active tuberculosis.⁸ INH resistance has been reported in up to 47 per cent of Ethiopian isolates.⁹

The prevalence rate of intestinal parasites (36.7 per cent) is somewhat lower than the 80 per cent reported in Southeast Asian refugees.¹⁻⁵ This may be related to relatively high socioeconomic level of the refugees that eventually reach the US. Although one stool examination is not sufficient to exclude parasitic infection, it is comparable to the screening methods used in other studies.

The spectrum of intestinal pathogens in refugee groups probably represents local environmental as well as cultural factors.^{2,5} *S. mansoni* is endemic in certain low-land areas of Ethiopia¹⁰ and has a prevalence of 4.2 per cent in this study. Urines were not screened for *Schistosoma hematobium* in this study and isolated patients may have been missed.

The prevalence rate of positive syphilis serology was 7.5 per cent. This is slightly lower than the 12.5 per cent found in a recent survey of an obstetrical population in Addis Abba.¹¹ Hepatitis B surface antigen carriage was detected in 9.4 per cent of individuals in this study, and is a reflection of

the high prevalence of hepatitis B in Ethiopia.¹² The addition of antibody testing for hepatitis B could be predicted to show a ≥ 40 per cent cumulative exposure rate. Endemic goiter (euthyroid) was seen in three patients in this study, and has also been noted in Southeast Asian refugees.⁴ The mountainous plateau in central Ethiopia appears to be the area of highest risk.¹³

We suggest screening procedures should include a history and physical examination, hematocrit, RPR/FTA, concentrated stool for ova and parasites, and urinalysis. Pregnant women should be screened for HB_sAg, and urine sediment should be examined for *S. hematobium* in those individuals with hematuria on screening urinalysis.

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