

STUDIES ON THE HELMINTHS INFECTION IN A KURDISH POPULATION IMMIGRATED FROM NORTHERN PART OF IRAQ TO IRAN, 1977*

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ABSTRACT

During 1976-77 a large number of Kurdish population in northern part of Iraq temporarily immigrated to Iran and settled in Dezful area of Khuzestan province, south-west Iran. Faecal examination of 3,263 samples for intestinal metazoan parasites and 1,154 urine samples for detecting *Schistosoma haematobium* infection were performed in different sex and age groups. The percentage of prevalent intestinal helminths infection were: *Ascaris lumbricoides* 25%, *Trichuris trichiura* 16.3%, *Hymenolepis nana* 14%, *Trichostrongylus* spp. 2.5% and Hook-worm 0.8%. Out of 1,154 urine samples only one infected case of *S. haematobium* from a 10 years old male child were detected.

INTRODUCTION

Intestinal helminthiasis is one of the major public health problems in under-developed and developing countries which up to the last few decades has failed to attract the attention of medical services, due to absence of overt clinical symptoms (W.H.O. 1964). In 1976-1977, a large number of Kurdish people from northern part of Iraq immigrated to Iran due to some political problems. The major portion of this population (approximately 100,000) were settled in Dezful area of Khuzestan province in South-West of Iran. The home place of this

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people were Arbil, Ravandoz, Karkuk and Soleimanieh in north-east of Iraq (Map 1).

The main purpose of this study was to determine the type of parasite they are carrying and may introduce such parasitic infestations to Dezful area, which is one of the most vulnerable parts in Iran for spreading of helminthic infections.

MATERIAL AND METHODS

This investigation was performed in the Dezful Medical Research Station, Institute of Public Health Research, Teheran University. A total of 3,263 individuals in different age and sex groups were examined by a single stool examination for detecting the helminths ova. The method used in this study was formalin-ether concentration technique. In the meantime, a total of 1,154 urine samples were also examined for detecting urinary schistosomiasis which is one of the prevalent parasitic infestation in southern part of Iraq (Quarterly Field Reports of Bilharziasis in Iraq, 1977)⁶.

RESULTS

Prevalence of infection with various intestinal helminths in different age groups is shown in Table 1. The most prevalent metazoan parasitic infection were *Ascaris lumbricoides* 25%, *Trichuris trichiura* 16.3%, *Hymenolepis nana* 14%, *Trichostrongylus* spp. 2.5% and Hookworm 0.8%. In the meantime a total of 8 cases *Taenia* and 70 cases of *Entrobium vermicularis* also were detected. There were no significant variations seen in the prevalence of infection in different sex and age groups (see Table 2), but there were higher infection rate of *H. nana* in the younger age groups (6—15 years old children).

Out of 1,154 urine samples examined from different age and sex groups only a single case of *Schistosoma haematobium* infection were detected from a 10 years old male child.

DISCUSSION

Ascaris infection rate of 25% in Kurds population of Iraq was more or less similar to Khuzestan region of Iran (17%) (Massoud et al, 1969)²; but *Trichuris* infection rate of 16.3% is much higher than this parasite infection in Khuzestan (6%).

The infection rate of trichuris in Kermanshah and Rezaiyeh area of Iran is rather similar to that in north-east Iraq, which local living

conditions is similar in both countries.

Trichostrongylus infection rate was very low in the Kurdish population (2.5%). Studies by Ghadirian et al (1973)³ in Kermanshah, Tabriz and Rezaiyeh areas in Iran showed 19%, 8% and 2% of *Trichostrongylus* infection respectively, which was rather lower than the other parts of Iran, e.g. Minab 37%, Isfahan 67% and Khuzestan 30% (Ghadirian et al 1972⁴ and Massoud et al 1979).

Also low infection rate of *Trichostrongylus* have been reported by Ghadirian et al (1975)⁵ in settled nomad population and high prevalence in nomads who migrate with their herds; whereas the reverse is true for *Ascaris* and *Trichuris* infections which the prevalence is high in settled population and low in migrating nomads.

Low rate of hookworm infection in north-east of Iraq in comparison with the west part of Iran is rather similar and match with the type of agriculture and living conditions in both areas. *Hymenolepis* infection rate again in both countries is comparatively high and similar due to contagious root of contamination and mostly is prevalent in younger age groups.

ACKNOWLEDGEMENT

This study was supported by the Institute of Public Health Research, Teheran University.

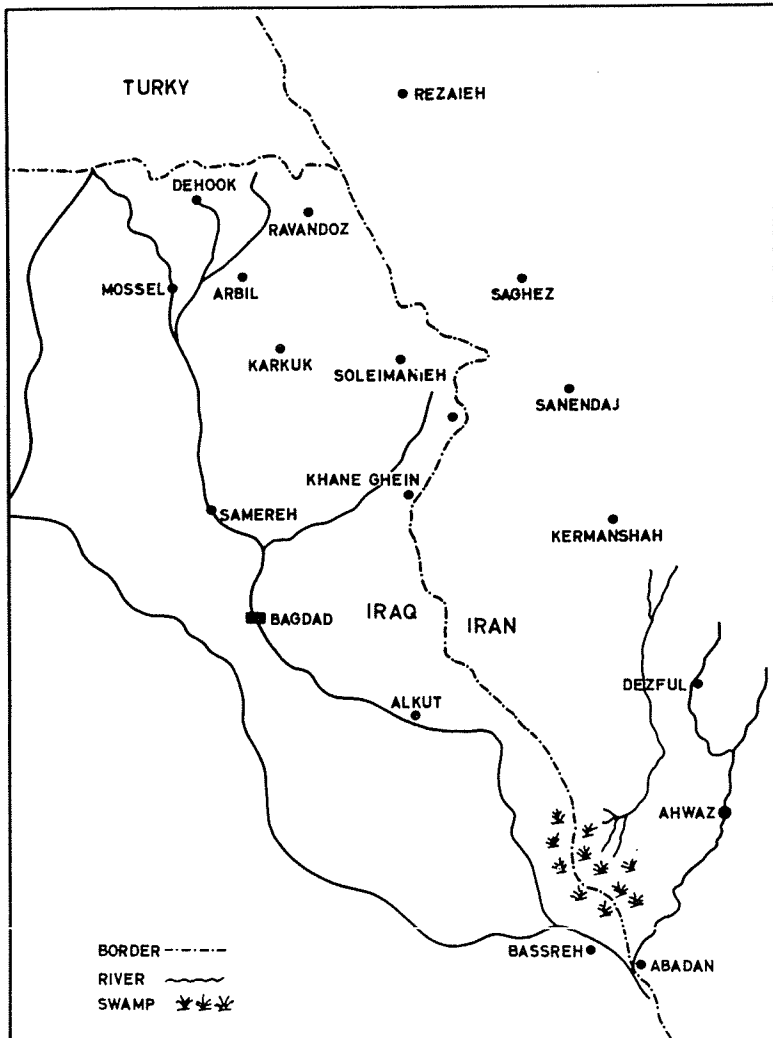
I am indebted to the staff of Dezful Medical Research Station for their generous technical assistance.

Table 1
Percentage of infection with various helminths in different age groups
in Kurdish immigrants in Iraq (1977)

Age group	No. examined	Percent infected with:			
		Ascaris	T. trichiura	Trichos.spp.	Hookworm
0 - 5	726	18	8.8	2.2	0.5
6 - 10	772	27	16.7	1.8	0.3
11 - 15	458	28.8	23.6	4	1.7
16 - 20	348	31	18.4	5.7	3
21 - 40	463	26	20.7	2.4	0.2
41 - 70	496	22.6	14.5	0.8	0.0
TOTAL	3,263	25.0	16.3	2.5	0.8

Table 2
Prevalence of different helminthic infections in different sexes (1977)

Sex group	No. examined	Percent infected with:			
		Ascaris	T. trichiura	Trichos.spp.	Hookworm
Male	1,728	23.6	15.7	1.8	0.6
Female	1,535	26.3	17.1	3.4	1.0
Total	3,263	25.0	16.3	2.5	0.8



Map. 1 — showing location of surveyed area in north-east of Iraq.

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