

HELMINTHIC INFESTATION IN HAZARA DIVISION

Pages with reference to book, From 11 To 13

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Abstract

Of 6874 faecal Samples from 3 hospitals in Hazara Division 12.9% were found to have helminthic infestation. This incidence was lower than othereDivisions (40.6%) of N.W.F.P. Anky lostoma infestation is also less frequent in Abbottabad (1.2%) than in Haripur (7%) and Mansehra (6%). (JPMA 36:11,1986).

INTRODUCTION

Parasitic infestations represent one of the greatest drains of human energy and is a dangerous health hazard. According to a world wide survey 460 million persons throughout the world were affected with hookworms, out of which 200 million were in India¹.

The knowledge of helminthic infestation in N.W.F.P. is scanty particularly in Hazara Division. The reason for this obscurity may be due to inadequate sampling in this division.

Hazara is the biggest division of N.W.F.P., but population-wise it is third having population of 3 million out of a total of 11 million for the whole province. Population is scattered, as most of the area is hilly.

Agriculture land is minimum in Abbottabad but relatively more in Haripur and Mansehra. Heavy rains is the only natural way of cleaning the dirty streets of the cities and towns. Most of the population gets its drinking water from springs and in a few areas from rivers. Most of the people in rural areas go out to the open fields to respond to the call of nature. This pattern of living is likely to influence the prevalence of parasitic infestation. Reports on the frequency of parasitic infestations are available from other citiet²⁻⁷ of Pakistan but no such survey has so far been published from Hazara Division.

Keeping this in view, 6874 faecal samples were collected from three hospitals of Hazara Division during 1983-84. An analysis of collected data infestation in this area revealed some interesting facts regarding helminthic infestation in this area.

MATERIAL AND METHODS

All faecal samples received for examination in the laboratories of District Headquarter Hospital, Abbottabad, Tehsil Headquarter Hospital, Haripur and Bach Christian Hospital Qalandarabad (District Mansehra) were checked for helnlnths.

Stools were examined by saline and iodine methods in D.H.Q. Hospital, Abbottabad. Saline concentration method was also used where considered necessary. Initially macroscopic examination of collected stools specimen was carried out to determine its consistency and the presence of mucus and blood. A printed proforma was filled for each individual listing his particulars, clinical history and physical examination.

RESULTS

Out of the total cases examined, 19.0% from Haripur, 14.6% from Mansehia and 11.2% from Abbottabad were found positive for helminthic ova (Table I).

Table I **Intestinal Helminths in Hazara.**

	Haripur	Mansehra	Abbottabad	Total
Total Samples	420	2304	4150	6874
Positive Samples	78	338	465	881
Frequency in Percentage	19	14.6	11.2	12.8

Table II **Prevalence (Percentage Infection) of Intestinal Helminth Parasites by Sex in Hazara Division.**

	Haripur		Mansehra		Abbottabad		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Cases Examined	400	20	1362	942	2855	1295	4617	2257
Positive Cases	71	7	206	132	349	116	626	255
Frequency in Percentage	17.75	35	15.12	14.01	12.2	8.9	13.6	11.2

Table II shows the prevalence of intestinal helminths according to sex in Haripur, Mansehra and Abbottabad. Overall frequency in males was 13.6% and in females 11.2%.

Table III **Frequencies of Specific Intestinal Helminth Parasites in Hazara Division.**

	Haripur	Mansehra	Abbottabad*	Total
Total Cases Examined	420	2304	4250	6874
<i>Ascaris lumbricoides</i> No:(%)	44 (10.5)	114 (4.94)	345 (8.31)	502 (7.3)
<i>Ankylostoma Duodenale</i> No:(%)	30 (7.14)	138 (5.98)	50 (1.20)	218 (3.2)
<i>H. nana</i> No : (%)	3 (0.71)	48 (2.08)	40 (0.96)	91 (1.45)
<i>T.Saginata</i> No:(%)	0	25 (1.64)	10 (0.024)	48 (0.69)
<i>E.vermicularis</i> No : (%)	0	8 (0.34)	20 (0.48)	28 (0.40)
<i>T. trichiura</i> No : (%)	1 (0.24)	5 (0.21)	13 (0.32)	19 (0.26)

* The total number of positive cases in Abbottabad as shown in Table-I is 465 while in this table i.e. Table No. III the positive cases are 478. This discrepancy is due to the fact that thirteen cases showed double infestations.

Table III shows frequencies of specific intestinal helminths in Haripur, Mansehra and Table I Abbottabad. The highest frequency was observed for *Ascaris Lumbricoides* (7.3%), and the lowest for *Trichuria* (0.26%). In Haripur highest incidence was observed for *A. lumbricoides* (10.5) while it was the lowest for *T. saginata* and *E.vermicularis* (zero). In Mansehra the highest and lowest incidence was observed for *A. duodenale* (5.98%) and *T. trichiura* (0.2 1%) respectively. In Abbottabad, *A. lumbricoides* was found to be more prevalent (8.31%) while the least prevalent helminth in this area was *T.saginata* (0.24). In 13 cases infestation with more than one helminth was noted and *Ascaris lumbricoides* infestation was accompanied by other helminths. In 5 cases *A.lumbricoides* infestation

was accompanied by *Ankylostoma* infestation, and in remaining 8 cases by *H.nana* infestation.

DISCUSSION

The present study was carried out in Hazara Division so as to know about the prevalence of intestinal helminths among the inhabitants of this division. The frequency of *A.lumbricoides*, *T.trichiura*, *A.duodenale*, *H.nana* and *H.saginata* was found to be lower in Abbottabad than in Mansehra, because the people of Abbottabad are relatively more educated and have piped water and latrine facilities. As Hazara Division is a hilly area, hills are the only natural way to help the drainage of the dirty water from the streets.

Frequency of *A.lumbricoides* infestation is higher in Haripur (10.5%) and Abbottabad (8.31%) as compared to that of Mansehra (4.98%). *A duodenale* (hook worm) infestation is low in Abbottabad (1.2%) as compared to that of Haripur (7.14%) and Mansehra (5.98%), while there is no marked difference in the frequency of *Trichuris* infestation in the three towns/areas. No case of *T. Saginata* or *E.vermicularis* infestation was reported from Haripur.

In Mansehra and Abbottabad there is little difference between helminthic infestation among the two sexes while in Haripur there is a marked difference and males have higher infestation than females.

In a Peshawar study⁶, a frequency of 48.6% of helminthic infestation was reported of which 40% were *Ancylostoma*. A still higher frequency of *Taenia* infestation has been reported from Dadar (District Mansehra).

Partially cooked beef might be responsible for infestation with *T.saginata*. Moreover unhygienic habitats of these people living in rural areas is obviously a contributory factor. The current survey will help in effective treatment of the community and to eliminate favourable epidemiological factors responsible for the spread of intestinal helminths among the communities of Hazara Division. In order to safeguard the health of the people, the local authorities should pay attention towards improving the existing sanitary conditions so as to minimize the favourable epidemiological and environmental factors responsible for spreading of parasitic infestation. This problem could be partially solved by educating the masses and making them aware of the hazards of helminthic diseases.

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