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THE ZOONTIC IMPORTANCE OF FASCIOLIASIS IN ABBIS, ALEXANDRIA GOVERNORATE

(With 2 Tables and 3 Figures)

By

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أهمية الاصابة بالدودة الكبدية كمرض مشترك في أبيس - محافظة الاسكندرية

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تم جمع عدد ٤٣٠، ٦٤ عينة براز من الانسان والحيوان (أبقار وجاموس) على التوالي من قريتي ٧، ٨ بأبيس محافظة الأسكندرية وفحصت ميكروسكوبيا لوجود بويضات الدودة الكبدية . ولقد وجدت البويضات بنسبة ٦ر٧٤٪، ٧٥ر٦٨٪ في كل من الانسان والحيوان على التوالي الا أن اصابة الاناث كانت أكثر (٧ر٦٩٪) من الذكور (٥ر٨٥٪). وكان أعلى سن اصابة يتراوح بين ١٠، ٢٠ سنة الا أن جميع الأعمار ثبتت اصابتها بالدودة الكبدية.

SUMMARY

A total of 430 and 64 faecal samples were collected from man and animals (cattle and buffaloes respectively and examined microscopically for detection of fasciola eggs at Abbis 7 and 8 villages.

The incidence of fascioliasis in both man and animals were found to be 6.74 and 68.75% respectively. Moreover, the prevalence of human fascioliasis was found to be higher in female (7.69%) than in male (5.85%).

Moreover, it fhas been found that all ages were infested with fasciola and the higher infestation was restricted to the age ranged from 10 to 20 years.

INTRODUCTION

Cows and buffaloes are the main animal density in Egypyt, constituting therefore the main sources of milk and meat production. Fascioliasis constitutes one of the major hazards for livestock where favourable conditions of humidity and temperature are prevalent.

Among several surveys conducted to find out the incidence of parasitic disease infestation in man, few have indicated the presence of fasciola and only a small number of cases. FARAG et al. (1979) found that the total incidence of human fascioliasis was found to be 7.3% and the incidence in female (10.3%) was higher than in male (4.4%) moreover, the fasciola eggs were detected in the faeces of thirteen out of fifteen cows and buffaloes. In the same year, ZAKI, stated that the incidence of human fascioliasis was found to be 1.7%. These incidence was higher in male (1.4%) than in female (0.3%). In addition, the incidence of fasciola

eggs in cows and buffaloes were found to be 53.8 and 47.5% respectively. MAHMOUD (1983) mentioned that the incidence of fascioliasis in cows and buffaloes wre 71.8 and 65.9% respectively in Behera province.

The aim of the present work is to estimate the prevalence of fascioliasis as a zoonotic disease in the vicinity of infested animals.

MATERIAL and METHODS

The present study was carried out in Abbis 7 and 8 Villages in the vicinity of Alexandria Governorate.

Stool samples were collected from 340 patients (208 females and 222 males at different ages) admitted to the Abbis hospital in the investigated area after recording the main symptoms they suffered. Mean while, faecal samples were also obtained from 64 animals (40 cattle and 24 buffaloes). All the collected samples were microscopically examined for the presence of fasciola eggs using the simple sedimentation technique (FAUST et al., 1939) as folows:

Small part of the faeces was thoroughit comminuted in a vial with about 20 ml saline solution. The obtained suspension was strained through a sieve into a petri-dish and the sediment was allowed to settle out.

After an hour, the top of the two thirds including the floating debris was carefully poured off. Saline solution was than added nearly to the top of the dish and the faecal material was throughly resuspended with it. Repeatation of this procedure was carried out until the supernatent fluid was relatively clean. The supernatent fluid was poured off and the sediment was examined microscopically for detection of fasciola eggs.

RESULTS AND DISCUSSION

The data presented in Table (1) revealed that the total incidence of fasciola eggs in the examined human faeces was found to be 6.74% a percentage which is higher than that recorded by ZAKI (1979), but lower than those obtained by ASHTON et al. (1970) and HARDMAN et al. (1970). However, a nearly similar incidence was reported by FARAG et al. (1979). These variations may be due to the prevalent environmental conditions, the technique used for ova detection and the density of infested animal.

Fasciola infestation were recovered from 28 cattle and 16 buffaloes with an incidence of 70 and 66.8% respectively. A nearly similar incidence was reported by MAHMOUD (1983). However variable percentage were obtained by some other authors as ZAKI (1979) and FARAG et al. (1979) and as much as 1.7% and 7.3% respectively.

Concerning, the prevalent symptoms of fascioliasis in infested patients; they were found to be suffering from loss of appitite; loos of weight, cough, rigors, weakness, epigastric pain, pain in the right lower chest and jaundice. In addition white spots on the face (plate 2) night sweeting and urticaria were also observed.

Ascitis, oedema of most of the parts of the parts of the body including the legs (plate 1) were also detected especially in the advanced cases. However these symptoms were also recovered and previously recorded by FACEY and MARSDEN (1960) and COUMBARUS (1966).

In the view of data illustrated in Table (2), it can be noticed that the incidence of human fasciolasis was found to be higher in females (7.69%) than in males (5.85%). A result which coinside with that result recorded by HARDMAN et al. (1970) and FARAG et al. (1979). On the other hand, a contradictory opinion was given by ZAKI (1979) who found that the incidence of human fasciolasis was higher in males (1.4%) than in females (0.3%).

It is clearly evident from Table (2) that all ages were susceptible to be with the parasite except males over 40 years who were found to be free of the disease. In addition, the age group ranging from 10 to 20 years.

Regarding to the mode of infestation, it might be through the consumption of raw locally obtained green vegetables containing the encysted metacercaria. Therefore, it can be concluded that thorough cleaning and washing of the vegetables as well as cradication of the disease among different species of animals will be helpfull in preventing the spread of the disease.

Anyhow the problem of human fascioliasis in Egypt needs more efforts and further investigations in order to asses its magnitude and identify the types of infested fasciola. Moreover, a cooperation between the public health and Veterinary authorities and energitic steps sould be under taken in the control of this disease among man and animals.

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Table (1): The incidence percentage of fascioliasis among cattle, buffaloes and man.

Variable	Animal			Man		
	Cattle	Buffaloes	Total	Male	Female	Total
No. of examined	40	24	64	222	208	430
No. of positive	18	16	44	13	16	29
%	70	66.8	68.75	5.85	7.69	6.74

Table (2): The effect of age and sex on the prevalence of fascioliasis among human beings.

Age (years)	Female			Male			Total		
	No.of examined	No.of positive	%	No.of examined	No.of positive	%	No.of examined	No.of positive	%
Less than 10	20	1	0.48	41	2	0. 9	61	3	0.69
10 - 20	53	5	2.40	96	9	4.05	149	14	3.26
20 - 30	65	6	2.89	34	1	0.45	99	7	1.63
30 - 40	37	2	0.96	28	1	0.45	65	3	0.69
Over 40	33	2	0.96	23	-	-	56	2	0.47

LEGEND OF FIGURES

Plate (1): Showing oedema on the legs of patient infested with fasciola.

Plate (2): Showing a white spots on the face of infested patient.

Plate (3): Showing the egg of fasciola infested man (Meg. X 400).

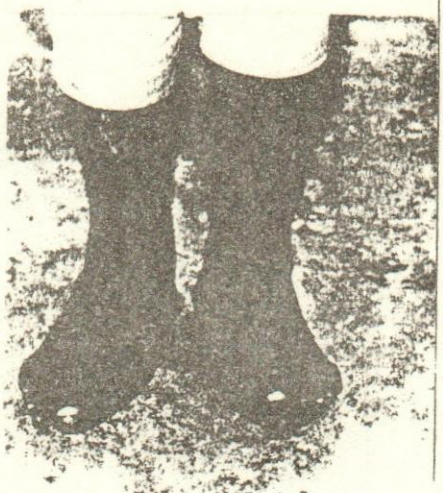

Plate (1)

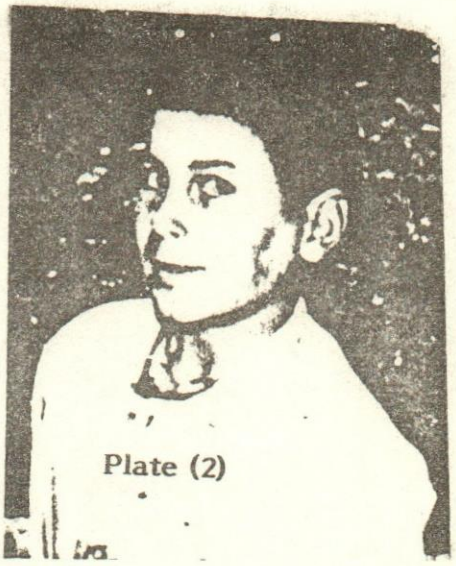

Plate (2)

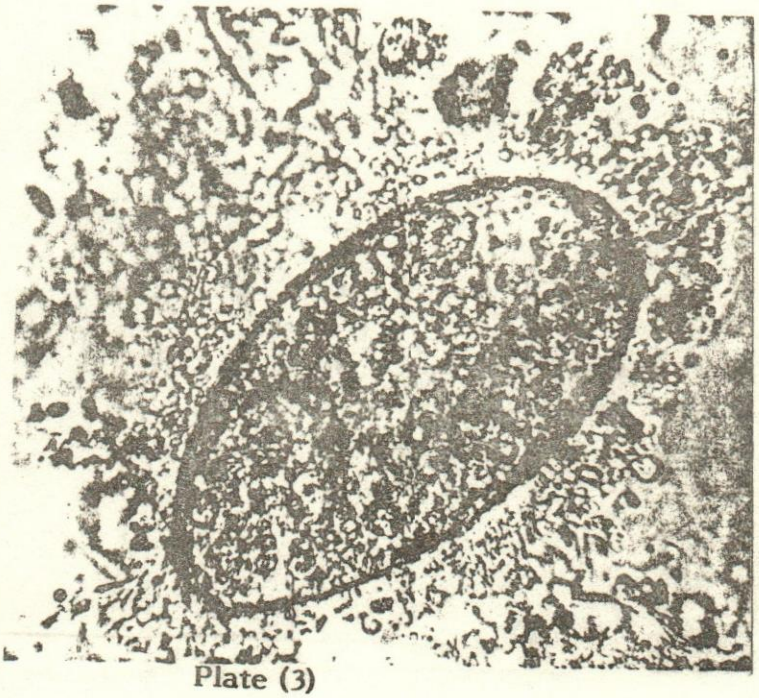

Plate (3)