
Urinary Schistosomiasis in Sebha, Libya

Abdul Hafeez Khan,* Ibrahim Shnaf Ali,** Omran M.Abdulrahman*** and Mohammed Y El-Khalifa***

Summary:

The incidence of *Schistosoma haematobium* in Libyan population is not very common and is a subject of awareness of medical importance. The article describes incidence of *S.haematobium* in three different Libyan patients (from December 2006 to December 2007) for the first time in Sebha. All the three cases of urinary Schistosomiasis have never been outside of Jamahiriya and acquired infection indigenously in Libya.

Introduction

Schistosomiasis is a major human disease with 600 million people in 74 countries at risk¹. About 200 million people are infected with Schistosomes, of whom 120 million are symptomatic and 20 million suffer from severe disease. The possible mode of transmission in Libyan Arab Jamahiriya is unknown.

A survey of urinary schistosomiasis was conducted in 18 school children in Ubari district in Fezzan², 5.3% children were found to be infected with *S.haematobium*. Moreover, workers also found *Bulinus* snail host in eleven towns and villages in their farms. Gebreel *et al*³ reported 6.9% infection of *S.mansoni* in the stool samples of primary school children in Tauorga town, near Tripoli. Beccush *et al*⁴ studied prevalence of *S.mansoni* in Tauorga town, North-West, Libya in 9 localities within 2 km from spring. The study revealed that the overall prevalence of *S.mansoni* was 20.85%, which varied between 1.78% and 55.58% in different localities. Significantly higher prevalence was observed in males than females.

Through a routine urine examination in 2nd March Hospital, Sebha. We came across the three patients of urinary Schistosomiasis.

Case 1: A 24 year old Libyan girl admitted to Infectious Department, 2nd March Hospital, Sebha in December 2006. Eggs of *S.haematobium* were seen in urine with numerous red blood cells and epithelial cells. The patient is a resident of Sebha and did not visit outside of Libya and has never been outside Libya nor Sebha city.

Case 2: A 22 year old Libyan boy from Outpatients Department (December 2007), 2nd March Hospital, Sebha. The patient lives in Manshia, a district of Sebha, and has never been outside of Jamahiriya. He had one and two short visits to Tripoli and Benghazi respectively. Urine examination of this patient revealed a heavy infection of *S. haematobium*.

Case 3: A 12 year old Libyan boy living in Hai Al-karama, a district of Sebha, was admitted to the Paediatric Ward, 2nd March Hospital, Sebha on 25th December 2007 with haematuria, painful micturation and dysuria. An ultrasound examination revealed a glandular mass in the left side of urinary bladder. Examination of urine of patient showed 2 to 3 eggs of *S.haematobium* per low-power (10x) field with numerous pus cells and red blood cells (Figure 1). The patient has never been outside of Libya, but he had once been in Benghazi for quite some times. The patient was transferred to Tripoli Medical Center (TMC) for further evaluation and treatment.

Discussion

The eggs recovered from urine of all three patients were identified as eggs of *S.haematobium*, having the characteristic of terminal spine. Urine examination did not show any other parasitic infection. The cause of haematuria in the patients is due to eroding of blood vessels of urinary bladder by the terminal spine of eggs of parasite. The third patient is a chronic urinary Schistosomiasis.

*) Department of Parasitology, Faculty of Medicine, Sebha University, Sebha.

**) Department of Biochemistry, Faculty of Medicine, Sebha University, Sebha.

***) Department of Microbiology, Faculty of Medicine, Sebha University, Sebha.

****) Department of Paediatric, 2nd March Hospital, Sebha.

The glandular mass in urinary bladder of the patient may be due to chronic mechanical irritation caused by the eggs of *S.haematobium*.

This is the first study that shows the incidence of *S.haematobium* in Sebha, Libya. Further studies are required to find the possible cause of mode of transmission as the climate of Sebha (dry and hot climate) is unfavorable for the surveillance of fresh water snail host of this parasite. The disposal of water from houses which may make ditches, irrigation in parks and picnic spots and agricultural projects may be intended to provide suitable environment for snail host, also for surveillance of Schistosomes in Libya.

In Libyan Arab Jamahiriya practicing physicians and clinicians usually have low awareness for schistosomiasis among Libyan people. These infections are over looked in Clinical Laboratories. For this reason, the

frequency of Schistosomiasis and source and mood of infection are poorly known to health authorities.

Infections of *S.haematobium* are occurring in Sebha, and more attention should be paid to the diagnosis, prevalence of snail host, and people must be advised on the public health of the importance of urinary Schistosomiasis in Libya.. Therefore, there is obligation to communicate the occurrence of schistosomiasis to health authorities to determine potential health risk for community.

Acknowledgements: We are thankful to Mrs.Mona, Miss Zohra, Miss Hazir, Miss Mubrooka and Miss Sausan Clinical Microbiology and Parasitology Laboratory 2nd March Hospital, Sebha for their assistance during the urine examination of patients.

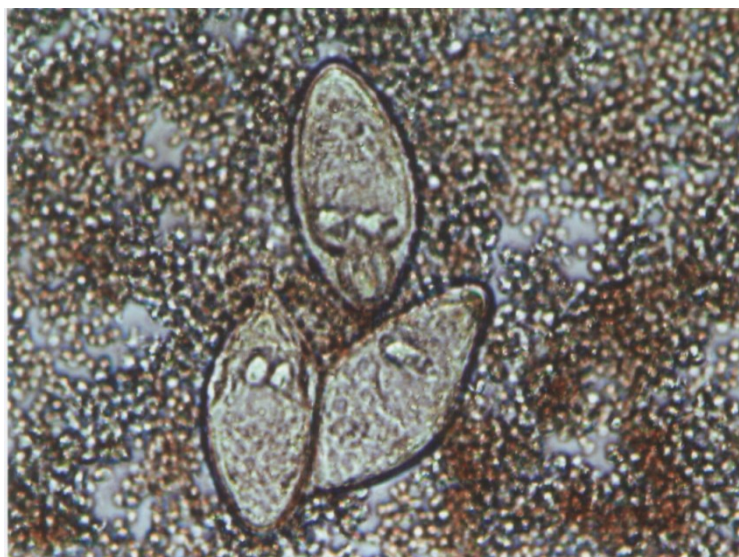


Figure 1: *Schistosoma haematobium* eggs with pus cells and red blood cells

References:

1. Chitosulo L, Engels D, Montresor A, Savioli L. The global status of schistosomiasis and its control. *Acta Tropica* 2000; 77:41-51.
2. El-Gindy MS, El-Edrissy AW. Present situation of schistosomiasis in the Libyan Arab Republic. *Bilharziasis in Ubari District in Fezzan (Sebha Governate)*. *Egypt. J.Bilharz* 1975;2(1):117-130.
3. Gebreel AO, Gilles HM, Prescott JE. Studies on sero-epidemiology of endemic diseases in Libya. III Schistosomiasis. *Ann. Trop. Med. Parasitol*, 1985; 79(1):31-41.
4. Baccush MM, Nayak CS, Gebreel AO. Prevalence of *Schistosoma mansoni* in Tauorga town, North West, Libya. *J.Egypt. Soc. Parasitol.* 1993; 23(2):527-533.