

letters

The use of cercariae infection of the *Bulinus truncatus* snail for evaluation of schistosomiasis control in Iran

To the Editor: Urinary schistosomiasis caused by *Schistosoma haematobium* has been reported from many countries in Africa and Asia.¹ Many studies have been conducted on the distribution, ecology, biology and host-parasite relationships of the snail in Khuzestan during the 1970s by the staff of the Schistosomiasis Control Project.²⁻⁵ Because of political changes in the neighboring country of Iraq where urinary schistosomiasis was prevalent, and because of the constant travel of Iraqi citizens to these areas, local and national health authorities wanted an evaluation of the current situation of the disease from the viewpoint of parasite transmission from snails to the local inhabitants.⁶ Therefore, the present study was conducted to determine the presence of *Schistosoma cercariae* in local *Bulinus* snails as criteria for evaluation of the schistosomiasis control program in the rural area of the southwest of Iran.

A total of 2400 *B. truncatus* snails were randomly collected from southern and eastern districts of the Dezful region and transferred to a health research centre. Collected snails were examined for shedding cercariae by using artificial light, leaving over night or by crushing snails in a glass plate. Cercariae were identified by systematic key references.⁷ Of the total of *Bulinus* snails examined for schistosome cercariae, 52 (2%) were found to be infected with *Amphistome cercariae*, and 15 (0.05%) with *Strigea cercariae* (Figures 1, 2, 3). Not a single *Schistosoma* cercaria was obtained from the snails.

Evaluation of the progress of schistosomiasis control programs, by case detection, when the infection rate becomes extremely low, is expensive, time consuming and difficult. For these reasons, the method of examination of the snail intermediate host for the presence of cercariae of the parasite can be used as a new approach for evaluation of the transmission status of the infection. The abundance of snail hosts in this area, as well as the visiting of Iraqi citizens who may come from schistosomiasis-infested areas of Iraq, may cause reinfection of the local snails with the parasite. Various cercariae species including *Strigea cercariae* and *Amphistome cercariae* obtained from *B. truncatus* by shedding or crushing methods, can be easily distinguished from cercariae of schistosomes, which has no pharynx.

During the summer, Khuzestan province is very hot. For this reason, people, especially children, swim and play in the rivers or canals, which are used for agricultural purposes. In addition, many young children work on the agricultural farms without any protection on their hands or feet where *S. haematobium* as well as animal schistosome cercariae can readily penetrate the skin.⁸ Lack of *S. haematobium* cercariae in our samples in this region revealed that snails are free from this parasite and support the theory that transmission of schistosomes cercariae does not occur in the districts and therefore this disease is still under control, which is good news for inhabitants of the region as well as for local health authorities. Because of the presence of *Bulinus* in the other parts of province, use of this protocol for evaluating the transmission status of *S. haematobium* by finding cercariae of the parasite among local *B. truncatus* is recommended.

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