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Risk evaluation of *Schistosomiasis japonica* input to the Chaohu lake region in Anhui province of China

The Chaohu Lake is the only one with no *Oncomelania* snails among the five freshwater lakes in China. The purpose of this study was to analyze the impact of water transfer project from the Yangtze River to the Chaohu Lake on *Schistosomiasis japonica* transmission, and evaluate the risk of the disease input to the lake region. From 2008 to 2012, one fixed and three mobile surveillance sites in the Chaohu Lake region were selected, and the status of schistosomiasis infection among local people, mobile population and livestock were investigated. The distribution of *Oncomelania* snails was investigated in risk areas and suspicious areas, and the snail spreading pattern was analyzed through salvaging floaters in rivers connected with the Yangtze River. In addition, the *Oncomelania* snails were raised in the cages on the beaches of the Chaohu Lake from 2007 to 2010, and their survival and reproduction capacity was observed. It was found that, in 2008 and 2012, 301 and 314 local residents were tested with indirect hemagglutination assay (IHA), but there were no positives. From 2008 to 2012, a total of 1603 mobile population were examined by IHA, and the total antibody positives detected were 3.1% (49/1603); 75 individuals were examined by sedimentation method, and the positive rate was 36% (27/75). A total of 303 livestock were examined by stool hatching method, but none tested positive. A total of 1630 km² in risk areas and 3551 km² in suspicious areas were surveyed, but there were no *Oncomelania* snails. The investigation on snail spreading patterns indicated that snails could spread into the Chaohu Lake by adsorbing on floating debris. The field study revealed that *Oncomelania* snails could survive and reproduce in the Lake. The results of the study indicate that the risk of *Schistosomiasis japonica* input to the Chaohu Lake region is high; therefore, a long term surveillance scheme on *Schistosomiasis* should be established in the region.

Biography

Cao Zhi-guo is the Deputy Director of Disease Surveillance and Epidemiology Department of Anhui Provincial Institute of Parasitic Diseases. He is also working as the Associate Professor and he is mainly involved in schistosomiasis prevention and control task. He has published more than 30 papers in professional journals, and has won the second prize for Science and Technology Progress from Chinese Preventive Medicine Association.

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