RESEARCH NOTE

Identification of a Transmission Focus of *Schistosoma mansoni* in the Southernmost Brazilian State, Rio Grande do Sul

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Key words: schistosomiasis - *Schistosoma mansoni* - Rio Grande do Sul - Brazil

The southern known limit of occurrence of *Schistosoma mansoni* Sambon 1907 in Brazil was the northeast of the State of Santa Catarina (BR Schlemper Júnior et al. 1996 *Rev Soc Bras Med Trop 29*: 411-418). In Rio Grande do Sul (RS) , Brazil's southernmost state, *Biomphalaria tenagophila*, *B. straminea* and *B. peregrina* were known to occur, but both mollusc and human infection was never documented as autochthonous (HMS Teles et al. 1991 *Rev Saú Públ 25*: 350-352). The infected child found in São Valentim, RS, came with his family from the endemic area in Minas Gerais (JLZ Louzada 1973 *Rev Bras Med 30*: 533-535) and was not considered as an autochthonous infection by the Sucam (JLZ Louzada 1998, pers.comm.). *B. glabrata* was reported for the first time in RS after the finding of *S. mansoni* eggs in a patient (OJSP) living in Esteio (20 km from Porto Alegre), that was initially considered as an imported infection (OS Carvalho et al. 1998 *Mem Inst Oswaldo Cruz 93*: 39-40). An extended epidemiological investigation gave support to the idea of an autochthonous infection, even though the source of infection could not be identified. OJSP repeatedly denied contact with natural water collections in his travel to Rio do Sul (northeastern Santa Catarina), a locality without evidence of active transmission (Schlemper Júnior et al. *loc. cit.*). A second infected individual (VCS) was identified in a preliminar coproparasitological survey in Vila Pedreira (Kato-Katz = 216 eggs/g), the living place of the index case, sharing with OJSP the abscence of a recent history of travel to any known endemic area and the habit of collecting snails in the surrounding ponds and swamps to use them as bait in a fishing site at the Sinos River. Both individuals were treated and cured with a single dose of praziquantel 50mg/kg. OSJP was previously treated and not cured with oxamniquine.

The parasitological examination of *Biomphalaria* sp. from a pond (BA= Banhado do Azeite, 29°49'37" S, 51°10'56" W) next to the fishing site at the Sinos River has demonstrated the presence of cercaria with morphometric characteristics of *S. mansoni* (L Rey 1992 *Parasitologia*, Guanabara Koogan, Rio de Janeiro, 788 pp.), in 3 out of 362 snails (0.82%) from "WC" (the southern border of BA) and in 9 out of 816 snails (1.1%) from "Meio" (a site midway between the northern and southern corners of BA). No cercaria was found in 42 and 6 snails, respectively from "PV" (the northern corner of BA) and the "Brasilit" pond, next to BR 116 (freeway federal road). A sample of cercaria (80 per animal) was injected intraperitonially in albino mice, the result of which 9 males and 2 female worms of *S. mansoni* were recovered at 7 weeks post-inoculation.

A third infected individual (JCLS) was recently detected while investigating "facial edema" at a public health service in Esteio. The individual is a 12 years-old boy that had grown up next to the same fishing site and used to go into the water for collecting snails and conducting horses for feeding at the grassy margins of BA pond.

The possibility of expansion of the endemic area of schistosomiasis from its southern boundaries in the Americas has been a serious concern (WL Paraense & LR Corrêa 1987 *Mem Inst Oswaldo Cruz 82*: 577). Dispersion of *B. glabrata*

Financial support Fundação Nacional de Saúde, Secretaria de Saúde e Meio Ambiente and Pontifícia Universidade Católica do Rio Grande do Sul.
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Received 18 June 1998
Accepted 24 August 1998

from Esteio to the Sinos River and the Guaíba Lake may represent the definitive establishment of this planorbid snail in RS. Vigilance and identification of foci with active transmission and of people infected with *S. mansoni* is a top priority for this and other areas where *B. glabrata* may have been introduced in RS.

Ackwoledgements: to the community health agents "Ledi" and "Chica", the relatives of VCS and all the staff at the Public Health Service in Esteio, for their help.