

RESEARCH NOTE

Urban Schistosomiasis in Itamaracá Island, Pernambuco, Brazil: Epidemiological Factors Involved in the Recent Endemic Process

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Schistosomiasis has been considered as a rural endemic disease. In the State of Pernambuco, migratory human movements from endemic areas to urban ones with precarious sanitary and environmental conditions, is being pointed out as responsible for expansion and transmission of schistosomiasis (CS Barbosa et al. 1996 *Rev Saúde Pública* 14: 693-700).

The possibility that schistosomiasis mansoni could reach urban populations of high socio/economic background levels have been negleg. In 1991, four autochthonous cases from accidental exposure were detected near the Fort Orange beach, in Itamaracá Island, Pernambuco (JF Gonçalves et al. 1992 *Cad Saúde Pública* 7: 424-425). All cases occurred in individuals from medium/high classes, that were in vacation in the island. After the detection of these accidental cases our major objective was to search for factors involved in schistosomiasis transmission in this area: a condominium composed by 560 houses of vacationists or tourists, built upon a destroyed mangrove ecosystem.

An epidemiological quantitative study was conducted through demographic, sanitary, parasitological, social/economic and malacological surveys. Information about previous morbidity were also provided by the individuals that were temporary visitors in the area.

The malacology survey identified 19 breeding sites of *Biomphalaria glabrata* and 27 capture stations were set up. Snails were collected and examined each month during a year. The results show sazonal variation in mollusc populational density, associated with infection rates. The concentration of snails in water collections during the period from September to December 1997 were the highest observed, with infection rates of 18.2% (CS Barbosa et al. 1998 unpublished data). So, it is possible to imagine the potencial environmental risk of infection for human population in summer vacation on this beach.

In the coproscopical survey, fecal samples of 349 vacationists and 91 local inhabitants were collected. Among vacationists, 10 cases of *Schistosoma mansoni* infection were detected (Table I). Moreover, 12 additional confirmed and autochthonous cases of schistosomiasis, in the last three years, were detected by *referred morbidity survey* (Table II). The prevalence of infection among local residents (fisherman and civil construction laborers) was 41.8%. Either, vacationist and local residents showed very few eggs of *S. mansoni*, indicating low levels of exposure. However, vacationists showed clinical acute forms, with characteristic exacerbated symptoms. The autochthony of cases was confirmed by personal interviews.

We can conclude that the urban transmission of schistosomiasis in Itamaracá Island have dis-

TABLE I

Schistosomiasis cases and parasitic burden after stool examination of 349 vacationists, Praia do Forte, Itamaracá, PE, Feb. 1997

Patient identification	Sex	Age (years)	Parasitic burden (Epg) ^a
JMC	F	29	1,0
JJ	M	09	0,5
MCS	M	39	5,5
AC	M	33	1,0
WL	M	17	0,5
MTM	M	16	2,5
MG	F	22	2,0
RF	M	22	0,5
HL	M	04	0,5
RSN	F	07	1,8

a: eggs per gram of faeces

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TABLE II
Schistosomiasis cases, in the last
three years, detected by *refered morbidity survey* in
vacationists, Praia do Forte, Itamaracá, PE, Feb. 1997

Patient identification	Sex	Age (years)
GA	M	14
TF	F	16
VL	M	14
RB	M	44
RBF	F	11
RGB	F	07
MS	M	23
FGS	M	16
BC	M	18
MC	M	21
AC	M	14
ML	M	17

tinct risk factors in comparison to traditional rural endemic areas, with an unique socio-economical and behavioural characteristic.

We also point out the importance of the occurrence of this new epidemiologic profile of schistosomiasis in the State of Pernambuco, that can be related with the spread of this disease into urban areas and their social/economical repercussions.

Another data, regarding ecological and environmental primitive conditions of this area, are in analysis at moment, in partnership with ecologists of Federal University of Pernambuco. This information, in association with those of old local fishers (oral history), allowed the reconstruction of this recent endemic process.

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