

RE-INFECTION OF PATIENTS IN SCHISTOSOMIASIS MANSONI ENDEMIC AREAS AFTER SPECIFIC TREATMENT

II — Influence of BCG vaccination

Naftale KATZ, V. B. OLIVEIRA and R. S. ROCHA

A high degree of acquired resistance to *Schistosoma mansoni* infection can be induced by administration of BCG (bacillus Calmette-Guerin) in hamsters (Capron and Lesoin, 1969, C.R. Acad. Sc. Paris 269:2110-2112) and mice (Mahmoud, Civil and Warren 1976, Amer. Soc. Trop. Med. Hyg., 25th Annual Meeting, Philadelphia).

In a high endemic area of schistosomiasis mansoni (69.5% of prevalence) in the State of Minas Gerais, Brazil, 43 infected school children (5 to 14 years of age) have been treated with oxamniquine, 20 mg/kg body weight, single oral dose. One stool examination, by Kato-Katz quantitative method (KATZ, CHAVES & PELLEGRINO, 1970, Rev. Inst. Med. Trop. São Paulo 14: 397-400) was performed before treatment. For the parasitological control of cure, three quantitative stool examinations were made on successive days, six months later. For the evaluation of re-infection rate,

one, stool examination was performed 12 months after specific treatment. The percentage of cure (at 6 months) was 65.1%. At this time, BCG (Fundação Ataufo de Paiva, Rio de Janeiro) was administered to 13 out of 28 the school children considered as cured (no viable *S. mansoni* eggs in their feces). Each patient received 0.1 ml, by single intradermal infection, as a routine program for tuberculosis control.

All patients have been followed-up until six months after vaccination. The percentage of reinfected patients was 26.7 (4 out of 15) and 46.2 (6 out of 13) for the non-vaccinated and vaccinated group, respectively. No significant statistical difference could be found between both groups ($p=0.01$). Comparing the number of *S. mansoni* eggs per gram found before treatment and after reinfection, in both groups, no statistical difference ($p = 0.01$) between them was observed either (Table I).

T A B L E I

Effects of BCG on the prevention of re-infection of school children submitted to specific treatment and resident in endemic area

Group	Number of reinfected patients	Arithmetical mean of <i>S. mansoni</i> eggs		Reduction (%)
		Before treatment	After reinfection	
Vaccinated	6	2 227	268	87.97
Control	4	2 941	84	97.14

In spite of the small number of patients followed-up, it can be concluded that the BCG vaccination was not able to prevent *S. mansoni*

re-infection of children resident in endemic area, after successful specific treatment.

Recebido para publicação em 22/2/1978.