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BRIEF COMMUNICATION

PARASITOLOGICAL DIAGNOSIS OF SCHISTOSOMIASIS MANSONI: CONCOMITANT UTILIZATION OF KATO-KATZ METHOD AND HATCHING TEST

Clarice P. Abrantes LEMOS (1); Dirce Mary C. LIMA (1); Luiz Caetano da SILVA (1) & Pedro Paulo CHIEFFI (1)

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The laboratorial diagnosis of human infection by *Schistosoma mansoni* is not a completely solved issue. Indeed, some questions remain to be cleared up, mainly those related to the technical standardization.

RABELLO et al.[7] examining by rectal biopsy and parasitological techniques 217 individuals with positive immunological tests for schistosomiasis only found 68% with positive results.

Some parasitological methods can diagnose schistosomiasis infection and, at the same time, evaluate its intensity by the counting of eggs eliminated in the stool, as a consequence of the stability of schistosome egg laying when prolonged periods are analysed[6]. However, some fluctuations in the fecal egg shedding may be observed when an infected patient is examined several times during the period of 2 to 3 weeks[2]. On the other hand, para-

TABLE 1

Laboratorial diagnosis of 495 schistosomiasis mansoni patients by concomitant utilization of Kato-Katz method and hatching test

Results	Kato-Katz	Hatching Test
Positive	428 (86.46%)	407 (82.12%)
Negative	67 (13.54%)	88 (17.88%)
Total positives	495 (100%)	

TABLE 2

Evaluation after specific treatment of 228 schistosomiasis mansoni patients by concomitant utilization of Kato-Katz method and hatching test

Results	Kato-Katz	Hatching Test
Positive	9 (3.94%)	13 (5.70%)
Negative	219 (96.06%)	215 (94.30%)
Total positives	17 (7.45%)	

(1) Instituto de Medicina Tropical de São Paulo (LIM 06), Av. Dr. Enéas de Carvalho Aguiar 470, 05403-000 São Paulo, S.P., Brasil.

sitological techniques are simple and safe for evaluating the activity of infection after specific treatment[1].

The Kato-Katz method[5] by its good sensitivity, operational simplicity and low price has been considered the principal technique for the diagnosis of schistosomiasis mansoni, mainly in field conditions when many people have been examined[4]. The hatching test, on the other hand, has been applied in several situations with good results[3,8,9], avoiding the use of optical microscope and allowing the evaluation of the viability of the schistosome eggs eliminated by infected individuals.

During the period from September 1985 to December 1993, 495 outpatients followed at the Tropical Medicine Institute of São Paulo were diagnosed as infected by *S. mansoni* by both the Kato-Katz quantitative method (3 slides performed from each fecal sample) and a coprological qualitative technique known as hatching test.

Through the Kato-Katz method 428 (86.46%) infected patients were identified, while 407 (82.12%) were diagnosed by the hatching test. Only when the results of both techniques were put together it was possible to diagnose all the 495 infected patients. Therefore, the concomitant use of these techniques improved in 13.45% the results obtained by the Kato-Kaz method, currently utilized in the laboratorial diagnosis of human schistosomiasis (Table 1).

Better results were also obtained with the simultaneous use of both techniques for the evaluation of chemotherapy. Thus, among 228 schistosomiasis patients examined by both techniques in the 60th, 90th, 120th, 150th and 180th days after oxamniquine administration 17 (7.45%) remained positive for *Schistosoma* eggs. However, only 9 (3.94%) would be diagnosed if the Kato-Katz method had been used alone (Table 2).

In both situations (before and after specific anti-*Schistosoma* treatment) the statistical analysis did not show any difference between the Kato-Katz method and the hatching test.

Summing up, the concomitant utilization of both Kato-Katz method and hatching test improved the sensitivity of human schistosomiasis mansoni diagnosis before and after specific treatment.

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