Ova of *Schistosoma mansoni* in Purged and Unpurged Fecal Specimens[1]

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WE RECENTLY had the opportunity to compare the results obtained in the examination of fecal samples from schistosomiasis patients, who had, or had not, been administered a purgative beforehand. The samples came from a group of one hundred and twenty young men, found to harbor eggs of *S. mansoni* in their stools following a dose of magnesium sulphate. This same group was referred to us for treatment.

Before administering further drugs, we decided to first examine an unpurged sample from each of these men twice a week. All samples, as well as those later obtained after a purgative had been given, were examined according to De Rivas' method, but modified as follows: a small calibrated test tube was filled with 5 cc. of 50 percent hydrochloric acid and enough of the sample added to make a total volume of 6 cc. The feces were then thoroughly conminuted with the aid of wooden applicators or toothpicks, and the fecal suspension thus formed was passed through two layers of gauze, placed over a glass funnel, into a 15 cc. centrifuge tube. An equal amount of ether was then added; the tube was stoppered well and vigorously shaken. Centrifugalization for one minute at 3,500 revolutions per minute caused the separation of the mixture into four layers: (a) an ether top layer, (b) a detritus plug, (c) an acid layer, and (d) a small amount of sediment at the bottom. The detritus plug was loosened by passing a wooden applicator around it, and everything but the sediment poured off. The centrifuge tube was kept in a horizontal position in order to prevent the liquid from sliding back, as this would dilute the sediment again. The sediment was then removed with a capillary pipette and placed on a slide for microscopic examination.

An analysis of the data collected showed that in only 70 cases (53.8 percent) was the first fecal sample found to contain *S. mansoni* eggs. Twenty (20) patients (16.6 percent) harbored eggs in the second stool examination; 6 patients (5 percent) in the third; 8 patients (6.6 percent) in the fourth; one in the fifth, one in the sixth,

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and two on the eleventh stool examination. One of these cases had been given a saline purgative. Twelve of the group were negative in every instance after two, two, two, four, three, five, five, seven, three, five, four, and four examinations. Of 442 stool specimens examined, 226 (51 percent) were positive for *S. mansoni* eggs.

DISCUSSION

The finding of *S. mansoni* eggs in only 58.3 percent of the first fecal samples taken from these 120 cases is highly significant. These same cases had already been examined elsewhere, after the administration of a purgative, and found positive in each instance. Variance in the methods of obtaining these fecal samples is, in our opinion, the only reason that can be offered for differences in the results. As far as we can ascertain, none of the textbooks in parasitology recommend that a purgative be given prior to the collection of feces for the purpose of examination for *S. mansoni* eggs. In fact, Valencia Parparsén,[2] in Venezuela, is the only one who specifically recommends that such a procedure be followed. Our findings stress its importance, especially in cases with a light infestation.

SUMMARY AND CONCLUSIONS

The results obtained from the examination of purged and unpurged fecal specimens have been analyzed for a group of 120 patients suffering from schistosomiasis mansoni. The examination of the first fecal samples, when no purge had been given, showed the presence of *S. mansoni* eggs in only 58.3 percent of this group. It therefore seems that the eggs of this parasite can be found more readily after the administration of a purgative.

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2. J. Valencia Parparsén, Tratamiento médico de la schistosomiasis mansoni en los adultos. Rev. Policlínica Caracas, 11:293–307, 1942.