

S U M M A R Y

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The present study was designed to investigate the effect of *Schistosoma* parasitic infection on the following vital activities in mice and humans groups:

- I. The phagocytic and the bactericidal activities of polymorphonuclear phagocytic cell (PMN's).
 - II. The antibody production by the B lymphocytes, using the plaque assay described by Khalil and Attallah (1979).
- I) The practical part of this study concerned with the phagocytic and the bactericidal activities of PMN's gave the following results.

Human Groups:

40 patients were examined in this study, they were divided into two groups. The 1st group consisted of 20 patients in the early stage of infection, and the 2nd group consisted of 20 patients in the late stage of infection. 30 normal individuals were served as control.

First:

It was found that the phagocytic activity of PMN's in both infected groups was greatly lowered than that of the healthy control group. However, this decrease was

found to be nearly the same in the early and late stage of the disease.

Second:

The bactericidal activity was greatly decreased in the infected groups than that of the healthy control group. Also it was found that this activity was greatly lowered in the late infected group than that of the early infected one.

Mice Groups:

100 mice were examined in this study, they were divided into two equal groups. The 1st group was served as control, the 2nd group exposed to S.mansoni infection. It was found that the phagocytic activity of PMN's in the infected group was greatly decreased than that of the control group.

II. The practical part concerned with antibody production by B lymphocytes gave the following results.

Human Groups:

30 patients were examined in this study, they were divided into 2 equal groups. The 1st group was in

the early stage of infection, and the second group was in the late stage of infection. 20 normal individuals were served as control.

It was found that the antibody production by B lymphocytes in both infected groups were less than in the control group.

Mice Groups:

150 mice were examined in this study, they were divided into three groups:

Group I : 25 non-inoculated mice (these were considered controls to the other groups).

Group II : 25 mice injected with SRBCs

Group III : 100 mice infected with Schistosoma mansoni.

This group of mice were divided into subgroups, A and B.

Group IIIA: consisting of 50 mice, they were tested at different time intervals:

1. 10 mice were tested for the plaque forming cell after 4 days of infection.
2. 10 mice were tested for PFC after 7 days of infection.
3. 10 mice were tested for PFC after one month of infection.

4. 10 mice were tested for PFC after one months of infection and injected with 2×10^8 SRBCs 10 days before the plaque assay.
5. 10 mice were tested for PFC after one months and injected with 2×10^8 RBCs 10 days before the plaque assays.

Group IIIB: consisting of 50 mice infected with S. mansoni for 9-12 weeks before the plaque assay. They were divided into:

1. 15 mice were examined for the plaque assay.
2. 20 mice were injected with 2×10^8 SRBCs. 5 days before the plaque assay.
3. 15 mice were injected with 2×10^8 SRBCs 10 days before the plaque assay.

Mice groups were sacrificed and the number of spleen lymphocytes producing anti SRBCs were calculated, using the plaque assay described by Khalil and Attallah (1979).

1. It was found that the antibody production by the B lymphocytes in the 1st non infected group was greatly decreased than that in the 2nd non infected group.

2. The degree of response of B lymphocytes in the infected mice group (3rd group) was arranged in descending order of antibody production as follows:
 - a) Mice infected for 9-12 weeks and injected with sheep RBCs 5 days before dissection.
 - b) Mice infected with cercariae and dissected after 4 days.
 - c) Mice infected for one month and injected with sheep RBCs 5 days before dissection.
 - d) Mice infected for 9-12 weeks.
 - e) Mice infected for one month and injected with sheep RBCs 10 days before dissection.
 - f) Mice infected for one month.
 - g) Mice infected and dissected 7 days after infection.
 - h) Mice infected for 9-12 weeks and injected with sheep RBCs 10 days before dissection.