

BODY OF REPORT

SEATO Medic Study No. 96 The Pathogenesis of Opisthorchis viverrini
Infections: III. The Pathogenesis in
Laboratory Infected Monkeys .

Project No. 3A 025601 A 811 Military Medical Research Program
S. E. Asia

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SEASIA (Thailand)

Reporting Installation: US Army-SEATO Medical Research Laboratory
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 Department of Geographic Pathology

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Objective: The objective of the third part of the study of the pathogenesis of Opisthorchis viverrini infections is to observe the changes in laboratory infected monkeys and to compare the infections produced with those occurring naturally in cat and man and in other laboratory infected animals. As it is suspected that different reactions occur in various hosts, it is felt very important to study the pathogenesis of the infection in primates. A pilot study of the infection was started in January 1964 but the results were not encouraging, and therefore the project was tabled and finally re-written.

Description: Approximately 25 animals of various species which have been kept for some time are available. These monkeys will be given 3 stool examinations to check for the presence of ova and parasites and following this base line laboratory studies will be done and a liver biopsy will be performed. The animals will be infected with doses of 200 metacercariae as they become available. Liver

function tests will be repeated at intervals and upon sacrifice of the animals. Three animals will be sacrificed at 1, 3, 5, 10, 20, 35, 60 and 120 days, except that 2 animals which will be fed 4 times at intervals of 15 days will be sacrificed at 120 days. At the time the monkeys are infected, hamsters will be infected. One hamster will be sacrificed at the time the monkey is sacrificed and the others will be held for at least 40 days and sacrificed to check for viability of metacercariae.

Progress: The animals which were used for a pilot study in January 1964 have never had eggs in their stool. The first two animals were sacrificed at 40 days and no flukes were found when the liver was dissected, however, microscopic examination did show some chitinous material, foreign body reaction and eosinophile infiltration with striking proliferation of small bile ductules. Following this, a group of 6 animals was infected and sacrificed at 6 and 12 hours and at 1, 2, 3 and 4 days. Only in the animal sacrificed at 6 hours were fluke-like forms identified which apparently represent metacercariae, although they were large for the duration of infection. Significant histologic changes were not present in the other animals. Infection of the 25 monkeys now available will begin as soon as metacercariae are available.

Summary and Conclusion: No conclusion can be made at this time.