

PARAGONIMIASIS IN SIN HO DISTRICT, LAI CHAU PROVINCE, VIET NAM

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Abstract. Forty-four cases of pulmonary paragonimiasis, two also with evidence of cerebral infection, were found in Sin Ho District in Northern Viet Nam. There were 30 males and 14 females, 2-30 years of age. The diagnosis was made by sputum examination. Pet dogs and wild dogs in the area were also found infected and the people often eat roasted crabs.

INTRODUCTION

Paragonimiasis is an endemic disease in many Asian countries (Korea, China, Philippines, Lao PDR, Thailand and India) as well as in Africa (Cameroon, Nigeria) and Latin America (Peru, Ecuador). Over 20 million persons may have the disease world-wide. There are also previous reports of the disease from Viet Nam include Sin Ho District, Tai Chou Province where the present study was carried out from March 1994 to May 1995.

MATERIALS AND METHODS

The patients or subjects were suffering from chronic respiratory disease; fever, cough with or without bloody sputum, plural effusion. Some patients had recurrent respiratory disease and other symptoms of tuberculosis who did not respond to antituberculosis drugs. Sputum from all subjects were examined for *Paragonimus* eggs by the method of Suzuki. Morning sputum was also collected and examined from healthy persons. Some animals, dogs and cats were also examined for the parasites by surgical removal of the lung. Eating habits for all humans were also determined.

RESULTS

Forty-four persons participated in the study : 30 males and 14 females, 2 to 30 (av 11) years of age. They were from 4 ethnic groups; Kinh, 18; H'mong, 17; Dao, 6; and Hao (Chinese), 3. All had paragonimiasis; 42 with pulmonary and 2 with pulmonary as well as cerebral paragonimiasis. All of the patients had eaten poorly prepared roasted crabs. All patients were treated with praziquantel at dose of 25 mg/kg, three times per day for two days.

Sputum surveys were also carried out among school children and the general population. At the Sin Hao ethnic minority school, 125 sputa were examined

but none were found positive for *Paragonimus* eggs. Eighty-nine percent had a history of eating roasted crabs. Thirty of 90 people living at the SCO Sang Village (Ta Ngao commune) were examined and three were found to be positive (10%). Twenty students from the Ta Ngao minority school were examined and 5 (25%) were found to be positive. Five pet dogs and two wild dogs were examined by surgical-removal of the lungs and the pet dogs and both wild dogs were found infected.

DISCUSSION

Sin Ho District is located in the mountainous areas of Viet Nam at the border with China. It is about 1,000 km² in size and has a population of 50,000 people of several ethnic groups (Kinh, Dao, H'mong, Mang, Xa, Hao). Forty-four patients found in 9 of 22 communes were found infected with *Paragonimus* and 60% pet dogs and 100% of wild dogs were infected. Because of the isolation and inaccessibility, the study could only be done at the District Health Center and therefore, only a small portion of the population could be examined. It is believed that 300-500 more cases are present in the area and that 20-25% of the population in Ta Ngao and Sa De Phin could be carriers of the parasites. Many of the population often eat roasted crabs that may have not been cooked completely. Some people also drink water filtered from raw crabs. Further in depth studies should be conducted on paragonimiasis throughout Viet Nam.

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