

PARAGONIMIASIS IN MAE HONG SON PROVINCE NORTHERN THAILAND : CASE REPORT

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Abstract. Two cases of paragonimiasis have been reported from Srisangval Hospital, Mae Hong Son Province, Thailand. These two patients (Thai-Karen) resided in Nam-Piang-Din, Mae Hong Son. The preliminary survey for epidemiological data in Nam-Piang-Din, Mae Hong Son revealed that most of Thai-Karen villagers had the habit of eating raw crabs and fresh water prawns. A survey for intermediate and reservoir hosts are still in progress and this area can be considered as an additional area for paragonimiasis in Thailand.

INTRODUCTION

Paragonimiasis is endemic in Thailand. Cases from Saraburi and Nakhon Nayok in the central region and Loei Province in the northeastern region have been reported (Vajrasthira, 1969). The species that caused human paragonimiasis in Thailand has been reported to be *Paragonimus heterotremus* (Miyasaki and Harinasuta, 1966).

The purpose for this report is to describe two Thai-Karen children who dwelled in a village on Thai-Myanmar border. The diagnosis and treatment of pulmonary paragonimiasis was delayed because of the unfamiliarity of physicians in this area with the signs and symptoms of the disease.

CASE REPORTS

Case 1. A 3-year-old Karen girl was admitted to Srisungval Hospital, Mae Hong Son Province in May 1986, for evaluation of chronic productive cough. She had been in hospital three months prior because of pneumonitis and after ten days of treatment with penicillin, she was allowed home. She had paroxysmal coughing with brownish black sputum and no history of chest pain, anorexia, weight loss or malaise. She had not received any vaccines and her family history was negative.

On examination she was well nourished, mildly febrile and in mild respiratory distress. The abnormal physical findings were secretory rhonchi and decreased breath sounds over the

right hemithorax. Investigation showed hemoglobin 12 g/dl, WBC 11,800/mm³ with 71% neutrophils, 19% lymphocytes, 4% monocytes, and 6% eosinophils; normal urinalysis, liver function and renal function tests; Mantoux test 1:1000 negative; acid-fast stained sputum negative for five specimens. Chest x-ray showed patchy infiltration in the upper lobe and middle lobe of right lung.

The principal diagnoses considered were tuberculosis, atypical pneumonia and melioidosis. Paragonimus, in view of chest x-ray and sporadic cases reported from other northern provinces of Thailand, was also in the differential diagnosis.

Repeated history taking, physical examination were done and subsequent interrogation found that the child had lived in a Karenni refugee camp since birth and never migrated to Myanmar. She had eaten fresh water crabs while at home. Fresh sputum specimens were collected and many *Paragonimus* ova were observed. The patient was treated with a 3-day course of praziquantel (75 mg/kg/day in three divided doses). No side effects occurred.

Serial chest x-ray and sputum examination were performed 1, 2, 4 and 12 months after treatment. The films improved and *Paragonimus* ova were negative in the 4th month.

Case 2. A 13-year-old Thai-Karen boy was referred to Srisungval Hospital in September 1987 for persistent pulmonary infiltration and cough.

Two months prior to admission he had been treated in community hospital with several courses of antibiotics and did not improve.

On admission he was afebrile, adequately nourished, in no respiratory distress with normal vital signs. Physical examinations of the chest were normal. The Hb was 11.4 g/dl, WBC count was 8,700/mm³ with 9% eosinophils. Chest x-ray showed pleural thickening on the left side and nodular infiltration, which progressed to small multiple cavities with surrounded infiltration, in the right lower lobe. The Mantoux test 1:1000 was negative. Four sputum specimens were negative for acid-fast bacilli and contained many *Paragonimus* ova.

Praziquantel was given for three days in a dosage of 75 mg/kg/day in three divided doses. No adverse effects were noted. The patient was discharged and followed up monthly for three months. *Paragonimus* eggs in the sputum disappeared at the end of second month after treatment and normal chest x-ray was found in one year.

Preliminary surveys in the villages were done. The villages are in valleys where streams flow down to the Pai River and join the Salwin River. People in these villages have the habit of eating improperly cooked crabs, fish and fresh water prawns. Samples of crabs and fresh-water prawns were collected and metacercaria of other trematodes were found.

DISCUSSION AND SUMMARY

Two cases of pulmonary paragonimiasis were reported, both were children and lived in the villages near Thai-Myanmar border. The presentation of patients was chronic cough although they were still healthy. In one case, paroxysms of fever and productive cough occurred which may be due to superimposed bacterial infection. Extrapulmonary involvement was not detected. The diagnosis of paragonimiasis was established by the finding of eggs in sputum.

Radiologic findings are patchy and exudative infiltration, usually seen in patients with a short history of symptoms (Vanijanonta, 1984). In one case (No. 2), there were multiple cysts with

surrounding patchy infiltration, which mimics pulmonary tuberculosis.

Praziquantel, in divided dosage of 75 mg/kg/day for three days had been used in the patients. The cure rate was 100% and no side effects were detected. The recommended dose is 25 mg/kg body weight three times a day for 2 days (Benjapong, 1984; Johnson, 1985).

The diagnosis of paragonimiasis should be considered in people, especially children, with chronic cough who live in the northern region of Thailand. Sputum examination for parasite eggs should be performed in cases diagnosis of tuberculosis, and did not improve after adequate treatment. The detection of *Paragonimus* ova in sputum or stool can obviate the need for more extensive investigations and expensive treatment.

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