CEREBRAL PARAGONIMIASIS
REPORT OF FOUR CASES
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Paragonimiasis, or infestation by the lung fluke Paragonimus westermanii, is known to be endemic in certain areas of the Far East, particularly in Korea, Japan, and Formosa. In Korea it is found particularly in the areas of Yong Hung, Jun Joo, and the Yak Dong river valley. It is acquired by man by the ingestion of raw fresh water fish, an old traditional delicacy in this part of the world. The disease is so common that it is referred to as “To-Zil,” or endemic hemoptysis, and it presents a great problem from the standpoint of medical treatment, public health control and national economy.

It is known that Paragonimus westermanii may involve the lungs, pleura, liver, intestinal wall, mesenteric lymph glands, testes, muscles, peritoneum, and brain. The following 4 cases of cerebral cysts caused by paragonimiasis, which were encountered during the last year, are reported because of the rarity of cerebral involvement.

CASE REPORTS

Case 1. An 8-year-old Korean lad was admitted because of motor aphasia, right hemiparesis, and right 7th nerve paresis. He had a history of epileptiform seizures every 2–3 weeks from the age of 3 to 6 years, at which time the seizures stopped but there was insidious onset of right-sided hemiparesis.

Examination. He was a somewhat drowsy boy in no acute distress. His face was slightly puffy. His mentality was low. Positive neurological findings were a gross right hemiparesis, paresis of the right 7th and left 3rd nerves, diminished right-sided stereognosis and sensory response to touch and pin prick, hyperactive deep tendon reflexes on the right side, absent right abdominal and cremasteric reflexes, and a plantar extensor reflex on the right side. Visual fields and optic fundi were within normal limits.

Laboratory tests revealed Hct 36 per cent, Hb. 11.5, RBC 3.82 million and WBC 18,700 with 55 segs., 1 stab., 10 cos., and 36 small lymphs per cent. Urine and CSF were normal. Stool examinations were positive for Ankylostoma duodenale, Ascaris, Trichuris trichiura and Paragonimus westermanii. Repeated sputum examinations were negative for Paragonimus westermanii.

The chest film was within normal limits. Roentgenograms of the skull revealed nine disseminated calcified lesions scattered in the left frontal and parietotemporal areas, varying in size from a few mm. to 2 cm. (Fig. 1).

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Operation. A left parietotemporal craniotomy was performed and three small calcified cysts were removed from the arachnoid membrane and a 2-cm. calcified cyst was removed from the underlying cortex (Fig. 2). The cysts in the frontal area could not be removed.

The cysts contained the ova of *Paragonimus westermanii* (Figs. 3 and 4).

Course. Follow-up examination 1 month later revealed marked improvement in the right-sided hemiparesis and sensory defect.

Case 2. A 12-year-old Korean lad was admitted because of nausea, vomiting, headache, and diminished visual acuity. The visual symptoms had been progressive for 10 months prior to admission.

Examination. He was a slightly drowsy boy in no acute distress. The pupils were equally dilated and reacted sluggishly to light. There was bilateral papilledema of 3 D. with a right upper quadrant homonymous hemianopsia and left 3rd nerve paresis. The deep tendon reflexes were bilaterally hyperactive.

Laboratory studies showed a normal hemogram except for 15 per cent eosinophilia. WBC ranged from 6,650 to 15,550. The urine was normal. Stools contained *Ankylostoma duodenale*, *Ascaris*, and *Paragonimus westermanii*. Sputum examinations were negative for *Paragonimus westermanii* and acid-fast bacilli.

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*Identified by the United States Army Central Laboratory at Yongdung-Po, Korea.*