# An Unusual Intestinal Parasitic Infection

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In a recent article, the authors reported on a new technique to diagnose intestinal parasites.[1] This technique, along with a regular ova and parasite procedure, proved to be very useful recently in helping diagnose a patient who had several gastrointestinal problems which had not been helped by previous medical treatment.

The patient lives out of state and his business takes him to many different countries. During a telephone call to a Center worker, he complained of abdominal discomfort and pain, diarrhea and "irritable bowel syndrome". He was requested to send a rectal swab and a stool specimen for ova and parasites to the Center. Examination of the specimen showed *Blastocystis hominis* (4+) and an unusual parasite egg in his stool.

Upon further questioning of the individual, it was learned that he visited India (two months prior) and Thailand (three weeks prior) before sending the specimens to the Center. He also stated that when in foreign countries he would eat a "lot of local food"; he was especially fond of buffets and ate a lot of "salad with fresh fish".

The eggs found in his stool averaged 21.4 microns long; 17.4 microns in diameter; 1.3 microns in width with an operculum 4.3 microns long and 0.3 microns in width. Each egg contained a miracidium with bilateral symmetry. This appearance is similar to that of either *Clonorchis sinensis* or *Heterophyid trematode.* The diagnosis of *Heterophyid trematode* (H.T.) was made in this individual based on the history of travel to endemic countries and the morphology of the eggs, that is, symmetry of head of miracidium, short and wide egg, flat operculum and inconspicuous protuberance.[2]

## Discussion

It is very rare to find *Heterophyid* infections in the United States. These trematodes are small (less than 1.0 mm long), piriform or ovoid parasites of birds and mammals. They have a spiny integument and the eggs are small and embryonated when laid. The life cycle of H.T. is complicated. The first intermediate host is fresh water snails. The larva develops from the ovum to sporocyst, then redia to cercaria. The cercaria invade the second intermediate host, a fresh water fish or frog, and develop into a metacercaria. They develop into an adult in the definitive host, usually a fish eating bird and parasitize the intestine. Mammals, such as dogs, cats, raccoon, mice and humans can become infected by eating contaminated fish or frogs.[3,4,5]

Two common *Heterophyidae* flukes infecting humans are *M. vokagawai* and *H. heterophyes. M. yokagawai* is primarily an intestinal fluke of dogs and cats throughout Asia and parts of Europe. Human infections occur mostly in Asia. *H. heterophyes* is primary a fluke of dogs and cats in the Near East, Far East, and parts of Africa where human infections also occur. Both of these flukes live in the small intestine and are tolerated fairly well, however, in heavy infestations, abdominal discomfort and diarrhea may occur.[6]

This patient was treated with Yodoxin 650 mg (one tablet 3 times a day for 20 days) and Vermox (one tablet, 2 times a day, skip one week, and repeat). At the present time, two months after treatment, he was "feeling much better, has no G.I. distress" and is asymptomatic. A follow-up examination for stool parasites conducted seven weeks after treatment was negative.

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