SHORT REPORT: NEUROCYSTICERCOSIS IN AN ITALIAN TRAVELER TO LATIN AMERICA

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Abstract. Neurocysticercosis is rarely reported in short-term travelers, although the disease remains a major public health problem in tropical regions. We present a case of neurocysticercosis that was probably acquired by ingestion of *Taenia solium* eggs contained in the stomach of a pig butchered by the traveler. Complete clinical resolution was obtained by medical treatment, underlying the importance of early suspicion and diagnosis of the disease.

*Taenia solium* has a worldwide distribution, and human cysticercosis, which is due to tissue dissemination of its larvae, is endemic in Africa, Southeast Asia, and Central and Latin America. In industrialized countries, cysticercosis persists only as an imported disease, mainly involving immigrants from endemic areas; short-term travelers are very rarely affected. We report a case of cerebral cysticercosis in an short-term Italian traveler that may be useful as a precautionary tale.

A 43-year-old man with a history of a 30-day stay in Latin America (Salvador, Colombia, and Guatemala) three months earlier presented to a peripheral hospital with fever and myalgia in 1995. The clinical examination and routine laboratory test results were normal, except for increased creatine phosphokinase levels and mild eosinophilia. He received symptomatic therapy (acetylsalicylic acid as an anti-inflammatory), rapidly improved, and was discharged with a diagnosis of polymyositis.

Two years later, he was admitted to the University Hospital of Brescia with retro-ocular headache and recurrent right hemianopsia. A neurologic examination revealed a left Babinsky reflex with no motor and sensory disfunctions. All hematocchemical test results were normal, and repeated stool examinations were negative for eggs and protozoa. Results of radiologic and ultrasonography examinations of the thorax and abdomen were unremarkable. The results of an electroencephalogram and fundus oculi were normal. Cerebral magnetic resonance imaging (MRI) showed the presence of several intraparenchymal, subaracnoidal, and intraventricular cysts (4–15 mm in diameter) with peri-lesional focal edema and ring-like enhancement; in some cysts, adjecting mural nodules were evident (Figure 1). A specific antibody response to cysticercosis was demonstrated by both ELISA and immunoblotting techniques. The patient was treated with albendazole, 7.5 mg twice a day for two cycles of eight days each. One year later, he is in good health and cerebral MRI revealed significant reduction in the diameter of the lesions.

The travel history of the patient revealed that he had slaughtered a pig in Guatemala. The pig was eaten by all members of a small group of five persons. The remaining four persons were then traced. One person had died of an epatocarcinoma, one did not agree to be examined, and the remaining two were in good health and cysticercosis serology was negative.

This case shows an uncommon risk factor for human cysticercosis in short-term travelers to tropical areas. Humans are the definitive host of *T. solium*, while pigs are the intermediate host. Taeniasis is acquired by consumption of undercooked pork containing the cysticercal stage of the worm; human cysticercosis is caused by direct ingestion of eggs from contaminating human feces. Our patient bought and personally slaughtered a pig during his stay in Guatemala. We speculate that he ingested *T. solium* eggs contained in the stomach or duodenum of the pig that had recently ingested human feces. Since he was the only traveler in the group to slaughter the pig, this may explain why the others were not infected. The disease remained unrecognized at the early stage of larval invasion and two years later an endocranial hypertension syndrome revealed cerebral involvement. At this stage, MRI suggested the diagnosis, which was then substantiated by sensitive and specific serologic tests.

Early diagnosis of neurocysticercosis is important because medical treatment with albendazole or praziquantel effectively accelerate cyst resolution, especially when the lesions are in the active phase and calcifications have not yet occurred.

![Figure 1. Cerebral magnetic resonance imaging showing multiple intraparenchymal, subcortical, and lateral ventricle cystic lesions with surrounding edema, ring-like enhancement, and one adjecting mural nodule (arrowhead).](image-url)
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