Case Report

HUMAN INFECTION WITH BERTIELLA SPECIES IN SAUDI ARABIA


Introduction

Bertiella is a tape worm of the family: Anoplocephalidae of which many species exist as parasites of the nonhuman primates e.g. orangutan and different species of bonnet monkeys. Dogs also have been found infected with B. studeri in the Philippines. At least 29 human cases infected with B. studeri have been reported from the following areas; Minnesota (Stunkard et al; 1), Yemen (Shoura and Morsy; 2), Sri Lanka (Edirisinghe and Cumararajan; 3), Malaysia (Dissanaike et al; 4), Mauritius, India, Sumatra, Java, Borneo, Singapore, East Africa, St. Kitts and the Philippines (Beaver et al; 5). Human infection with B. mucronata has been reported in Latin America, Brazil, Argentina and Paraguay (Costa et al; 6 & 7). Human infection with Bertiella sp. has been reported in Saudi Arabia (Bolbol A. S.; 8), that appears to be the first report of an Anoplocephaline infection in man in Saudi Arabia. The morphology and life history of this tape worm were described by Stunkard (9). The adult parasite B. studeri has a total length of 30 cm while B. mucronata reaches up to 45 cm in length. Its scolex is subglobose with four muscular suckers and a rudimentary unarmed rostellum. All segments are shorter than broad and the maximum breadth reaches about 10mm. Segments are shed in chains of about 20 segments in stools or spontaneously. Mites play a role in the transmission of cysticercoid larvae. Man acquires infection by the accidental ingestion of mites containing cysticercoid larvae. Human infection may be asymptomatic or may be manifested by gastrointestinal disturbances in the form of recurrent abdominal pain, vomiting, anorexia, constipation and intermittent diarrhea (10).

Case Report

A male, 40 years old Yemeni patient living in Madinah, Saudi Arabia, attended King Fahad General Hospital complaining of occasional passage of fleshy structures out of his anus since about three years. This complaint was very irritating for him specially his condition was not diagnosed or treated. The patient brought 2 samples at 2 different occasions to the laboratory. Unfortunately they were not formalin fixed.

Examination of one of these samples showed that it was a part of a cestode parasite formed of 15 segments. Each segment was about 1mm. long by about 12mm. broad. Few segments were stained with Alum Carmine stain, mounted and examined for internal structures. Shed segments were all gravid with irregularly alternating common genital pores. Eggs were few, but were typically similar to those described by Stunkard (9) for the genus Bertiella. They showed an irregular ovoid contour (45 to 46 by 49 to 50 um); with a delicate middle envelope and an inner shell with a bicornuate protrusion on one side. Although the breadth of segments of the parasite from the present case was bigger than described by other authors, yet all other criteria were diagnostic of the genus Bertiella. The patient was treated with praziquantel, 20 mg/ kg. /body weight on 2 successive days. Follow up of the patient after two weeks showed complete absence of symptoms. It was not clear if the patient has acquired infection in Yemen or in Saudi Arabia.
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References


Figure 1. Bertiella spp. Segments before treatment