

Ileal Perforation Peritonitis Caused By T. Saginata: A Case Report

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Abstract

Worms are rare but definitive cause of intestinal perforation. Ascaris Lumbricoides is the main cause of intestinal perforation, especially in children. Other worms reported to cause perforation include Enterobius vermicularis, Trichuris trichura, and Tania solium. Tapeworm infestation is one of the common problems in tropical countries; usually they are asymptomatic but sometimes associated with serious complication like intestinal obstruction, appendicitis, or perforation. Few cases have been reported of perforation caused by T.solium in the literature, we present here a case report of tapeworm (T. Saginata) causing small bowel perforation and peritonitis.

Keywords: Ileal perforation, peritonitis, T. Saginata

Introduction

Perforation peritonitis is one of the most common surgical emergencies in India. Even with advances in peri-operative care, antimicrobial therapy and intensive care support, patients with peritonitis still suffer high morbidity and mortality¹. Many patients present late with pre-established sepsis and septic shock, which are associated with high mortality. The spectrum of etiology continues to be different from that of western countries and there is paucity of data from India ²

In India, duodenal ulcer perforation, appendicular perforation, enteric perforation, and tubercular perforation being a major cause for perforative peritonitis, as compared to western world where traumatic perforation accounts for maximum number of cases. Here we are presenting a case report of perforation with tapeworm peritonitis.

Manuscript received: 16th July 2013

Reviewed: 26th July 2013

Author Corrected: 29th July 2013

Accepted for Publication: 30th July 2013

Case Report

A 40 year old patient, Hindu by religion came with chief complaint of sudden onset severe pain in abdomen since one day. The pain was followed by 2-3 episodes of

vomiting, Patients had tachycardia (pulse = 102 beats/min). On per abdominal examination, patient had guarding and rigidity. In view of above findings clinical diagnosis of Perforative peritonitis was made.

His complete blood picture revealed hemoglobin- 11.2gm% and total leukocyte count- 11200. His blood sugar level, HIV- test and renal functions were normal. X-ray erect abdomen showed free gas under diaphragm. In view of above findings, diagnosis of perforative peritonitis was confirmed and patient was posted for emergency laparotomy. Intra operative- multiple flakes were present, and to our surprise there was ileal

perforation with tapeworm lying in peritoneal cavity (Fig1& 2). Tapeworm removed and thorough warm saline peritoneal wash was given, perforation was closed primarily and omentoplasty done (Fig 3).

Post operative period was uneventful. Patients was given Praziquantel 10-20 mg/kg body weight, he passed few more pieces of tapeworm. Histopathology report of worm



Figure 1- ileal perforation due to tapeworm



Figure 2: Perforation Site

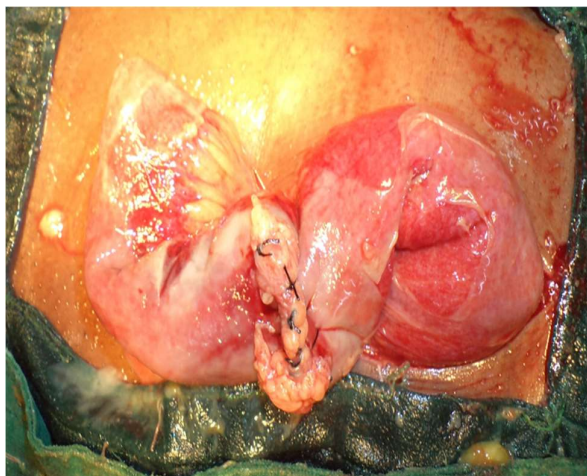


Figure 3- Closure of perforation

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confirmed it to be *T. Saginata* (Fig 4), and ulcer edge report was non-specific inflammation. WIDAL test was performed and it was negative.

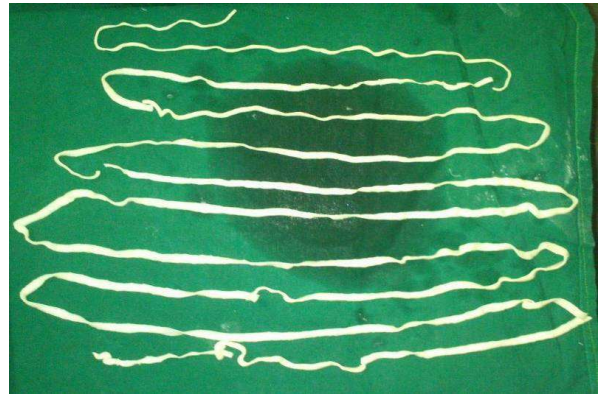


Figure 4- *T. Saginata*

Discussion

Taeniasis prevalence in tropical countries is high³. Tapeworm infestation is the infection of the digestive tract by adult tapeworms; larvae are sometimes ingested by consuming undercooked food.

Once inside the digestive tract larvae grow in to a very large adult tapeworm. Larvae can cause symptoms in as intermediate host, e.g. cysticercosis in humans.

Among the most common tapeworms in humans are the beef tapeworm (*T. saginata*), the pork tape (*T. solium*), the fish tapeworm (*Diphyllobothrium* spp.), and the dwarf tapeworm (*Hymenolepis* spp.). Infections involving the pork and beef tapeworms are also called taeniasis

Taenia Saginata is the beef tapeworm. Man is the only definitive host, and cattle are the significant intermediate host, though a variety of ungulates have been reported as being infected.

The larval stage is a translucent fluid filled bladder or cysticercus between 5-10 mm in diameter but, unlike *T.solium* cysticercus it has never been reliably described in humans.

The adult is large, white tapeworm that can reach 7-10 meters in length, weighing around 20-30 g. The scolex is

equipped with suckers but not hooks. Mature proglottidis detach from the distal end of the worm and their independent emergence from anus is the principal cause of symptomatology.

Human infection is acquired by eating undercooked beef. Cattle are infected when their feed or grazing is contaminated by human feces⁴.

A majority of the patients are asymptomatic and do not have serious sequelae, However, sometimes they present with pruritus ani (77%), nausea (46%), abdominal pain (43%), dizziness (42%), increased appetite (30%), and other mild gastrointestinal symptoms⁵.

Intestinal obstruction and perforation is commonly caused by *Ascaris lumbricoides* (Round worm). Other worms like *Enterobius vermicularis* (Pin worm), *Trichuris trichura* (Whip worm) and *Taenia solium* (Tape worm) can also rarely cause a similar picture⁶.

The incidence of the tapeworm infection has been reduced by proper preventive measures and antihelminthic drugs.

Praziquantel is the drug of first choice for *T. saginata* and 10-20mg/Kg body weight should be given as a single oral dose⁷.

Niclosamide is the drug of second choice. *T. saginata* and *T. solium* should be differentiated from each other by microscopic examination of their mature segments and gravid proglottid and scolex⁸.

If parasitological diagnosis is uncertain, praziquantel is the preferred drug because of the danger of cysticercosis. The patient should be observed for several months as a new worm can regenerate if the scolex or a minute piece of neck remains viable.

We report this case as tape worm (*T. Saginata*) being the rare cause of intestinal perforation, very few cases of perforation due to *T. solium* have been reported in literature^{9,10}.

Funding: Nil

Conflict of interest: Nil

Permission from IRB: Yes

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How to cite this article?

Kurane SB, Kurane BT. Ileal Perforation Peritonitis Caused By *T. Saginata*: A Case Report. *Int J Med Res Rev* 2013;1(3):138-141. doi:10.17511/ijmrr.2013.i03.11

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