

## Case Report

# Acute Abdomen and Taenia Solium Peritonii

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### ABSTRACT

This case describes a patient who, after a quarrel, presented with acute abdomen due to a perforation of the small bowel by *Taenia solium*. Surgery was done under

local anesthesia in a rural area. We describe the clinical presentation, operative findings and the postoperative course with a review of the literature.

KEYWORDS: local anesthesia, rural area, taenia solium

### INTRODUCTION

Small bowel perforations due to helmenthic infestations are mainly caused by *Ascaris lumbricoides*<sup>[1]</sup>. Review of relevant literature of the last 20 years did not reveal many parasitic causes of intestinal perforations. *Taenia solium* is an exceptional cause of small intestinal perforation<sup>[2]</sup> and is probably under-reported.

### CASE REPORT

A 30-year-old male was involved in a quarrel in East Timor while the authors were working under a UN mandate. The patient reported eight hours after the incident with signs and symptoms of acute abdomen and was in shock. He presented with a tachycardia of 130/minute, blood pressure 100/60 mm Hg and a temperature 37 °C.

The abdominal examination showed tenderness and guarding all over and absent bowel sounds. No laboratory tests or X-rays were done for the patient due to lack of facilities in that area. Resuscitation and life-saving measures were performed. With a relatively sterile technique in the ambulatory clinic and under local anesthesia (Xylocaine 1% without adrenaline), laparotomy was performed. The peritoneal cavity was soiled with stool and many worms were moving inside. There was a perforation in the distal jejunum with many ribbon-shaped segmented worms coming out of it; the perforation was in the antimesenteric border. Through the perforation long multi-segmented worms (tapeworms) were protruding out, each about three meters in length (Fig. 1). The perforation was big necessitating resection with end-to-end anastomosis, ample wash with saline before closure of the abdominal wall, without any drain inserted. The patient was transferred to a

field hospital where he stayed for five days. After three weeks, the patient returned for follow-up with full recovery. He received a full course of praziquantel for two weeks.

### DISCUSSION

The presentation of patients with a small bowel perforation caused by *Taenia solium* cannot be distinguished from many other causes of acute surgical emergencies especially in elderly patients<sup>[2]</sup>.

The incidental presence of tapeworms in the bowel lumen contributes considerably to the bowel perforation. In doubtful cases a diagnostic laparotomy should be done<sup>[4]</sup>. The macroscopic picture of the small bowel perforation in our case cannot be distinguished from other common causes such as typhoid fever, which undoubtedly represents the most common cause of small bowel perforation worldwide<sup>[5]</sup>. It is quite possible that the tear in the bowel was caused by blunt trauma to the abdomen during a quarrel and that the worms protruded out of the perforation.

Taeniasis prevalence in tropical zones is high, sometimes leading to severe surgical complications with a high morbidity and mortality. The mortality rate in small intestinal perforation due to infestation may reach up to 42%, mostly related to the primary disease of the patient<sup>[6]</sup>. Small bowel perforation after a blunt abdominal trauma has lower mortality and morbidity due to earlier emergency management<sup>[7]</sup>. *Taenia solium* is unique because humans may act as both the definitive and the intermediate hosts. Humans become infected with the adult stage of *Taenia solium* following ingestion of undercooked pork meat containing cysticerci. The worm usually resides in the upper

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**Fig 1:** The worms (*Taenia solium*) removed by the forceps from the distal jejunum.

jejunum, and may live for decades, infestation with the adult worm can be detected by finding eggs in perianal scrapings or in the feces.

The stage and location of the parasite determine the prognosis and the treatment. For eradication of

the adult worm in the human intestine, niclosamide, paromomycin, mebendazole or praziquantel may be given. Praziquantel has been used to treat cerebral cysticercosis with a dose of 50 mg per kilogram given daily for 15 days<sup>[8]</sup>.

In summary, this report describes the presence of *Taenia* worms in the peritoneal cavity following blunt abdominal trauma.

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