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Scientific letter

Duodenal Perforation Associated With *Taenia saginata* Infestation[☆]

Perforación duodenal asociada a infestación por tenia saginata

Taenia saginata is a platyhelminth of the cestoda class. Adults are harboured in human intestines, which act as the definitive host, and the larval or cysticercus stages develop in the tissue of cattle.^{1,2} Human behaviour is essential for their survival, since contamination of fields with human faeces leads to the infection of the cattle, and the habit of ingesting raw or undercooked meat closes the cycle with the infection of humans.^{1–3}

These parasites are generally solitary. It is the head/scolex of the *taenia* that, with attachment organs (4 prominent suckers/acetabula), adheres to a point of the duodenojejunal wall, and the body/strobili moves freely in the intestinal lumen.²

The main mechanisms of injury of *taenia saginata* are toxic-allergic, depletive and irritative.² Infestation is generally asymptomatic, although minor gastrointestinal symptoms can be caused in some cases.^{1–3} Intestinal perforation is an uncommon complication in the course of *taenia saginata* infestation.^{1–3}

The objective of our study is to report a case of acute peritonitis due to duodenal perforation in which we identify the causal agent to be infestation by *taenia saginata*.

The patient is a 60-year-old woman with a prior history of hypertension, cholecystectomy and from an underprivileged socioeconomic class. She came to our consultation with epigastric abdominal pain over the course of the previous 24 h, which in recent hours had started to become very intense, accompanied by neurovegetative symptoms. She reported vomiting that same day, with the expulsion of proglottids, which had also been present in the faeces several days prior to the visit. Physical examination revealed pain and guarding in the upper hemiabdomen. Simple abdominal radiography showed a small pneumoperitoneum. Ultrasound

demonstrated perihepatic and interloop fluid. Arterial blood gas detected metabolic acidosis.

The patient's clinical condition worsened rapidly with the onset of septic shock, and intensive recovery treatment was begun with inotropic support and mechanical ventilation.

An emergency midline laparotomy was performed. We observed the presence of distended small bowel loops and clear peritoneal fluid containing abundant free proglottids in the peritoneal cavity. The perforation was found, which was less than 1 cm in diameter, in the fourth part of the duodenum at the duodenojejunal flexure, and a *taenia* measuring approximately 1.5 m was extracted from its lumen (Fig. 1A and B). We performed a simple closure with omental patch, peritoneal lavage and abdominal closure. In the intensive care unit, the patient had persistent multiple organ dysfunction and died within 24 h. The parasitological study confirmed the tapeworm was a *taenia saginata*.

Abdominal surgical complications related with *taenia saginata* are exceptional.^{1–7} A review of the literature revealed a very small number of cases reporting intestinal perforation as a complication of taeniasis.^{5–7} In all cases, the diagnosis was made based on findings during emergency laparotomy due to acute peritonitis.^{4–7} Perforations generally occur in the small bowel and, particularly, in the jejunum, and there is only one published case of perforation of the ileum.^{5–7} To date, there have been no case reports of perforations in the duodenum.

Although in one case multiple specimens with atypical morphology were seen, in most cases the infestations were of solitary specimens with normal morphology.^{4–7}

In previously published cases as well as the case we present, although it is difficult to establish the direct mechanism causing the complication, the etiological connection is highly probable.^{5–7}

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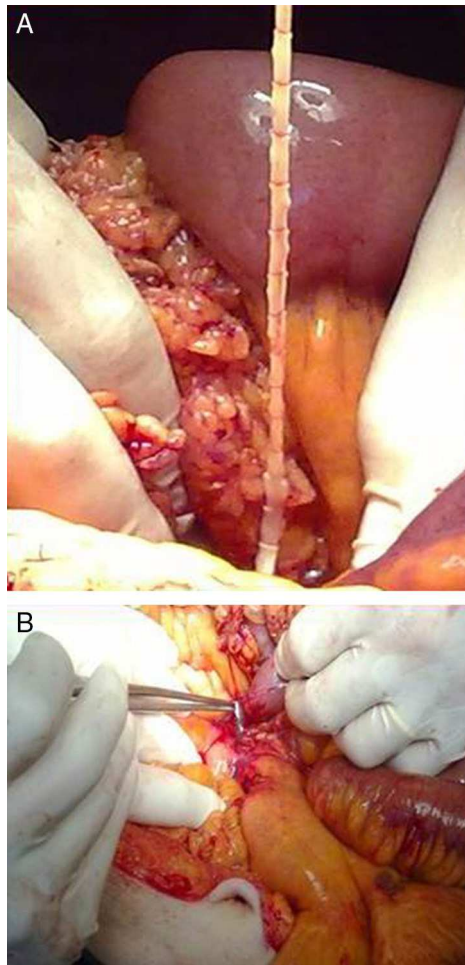


Fig. 1 – (A and B) *Taenia* measuring approximately 1.5 m long.

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