



Taenia Saginata: The Solitary Enemy

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Authors' contributions

This work was carried out in collaboration among all authors. Author AB designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors TE and HBA managed the analyses of the study. Author MRL managed the literature searches. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

We report the case of a 62-year-old female patient with no medical or surgical history, admitted for gastric adenocarcinoma. Its extension assessment was negative. She received 3 pre-operative chemotherapy courses and sent for total gastrectomy. Surgical exploration revealed a resectable gastric tumor without hepatic metastasis or peritoneal carcinosis. The enterotomy for restore continuity objectified the fortuitous discovery of a parasite type *tænia saginata* in the small bowel (Fig. 1). The patient was applied on praziquantel at a dose of 10 mg/kg.

Tapeworms are flatworms that can live as parasites in the human gastrointestinal tract. *Taenia saginata* are the intestinal solitary tapeworms for which humans are the only definitive hosts. She is found in many areas worldwide, but is most common in areas where consumption of undercooked beef is high. Most people colonized with adult *T. saginata* are asymptomatic; those with symptoms complain of mild abdominal discomfort, loss of appetite, or change in stool pat-tern. Occasionally segments can enter the appendix, common bile duct, or pancreatic duct and cause obstruction. The length of adult worm is usually 5 m; however, it may reach up to 25 m.

Taenia infection usually is diagnosed by identifying eggs or proglottids in the stool and cellophane-

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tape swab to detect eggs as early as about three months after infection. Eosinophilia and elevation of serum IgE may be present. Serological tests are not routinely performed. PCR based methods, providing definite diagnosis and species discrimination. The most complications of taeniasis are including abdominal pain, obstruction, inflammation, and perforation of small bowel, appendix, and colon. The treatment is medical by antiparasitic (or dewormers) praziquantel type.

Keywords: Tapeworms; *Taenia saginata*; dewormers; praziquantel.

1. INTRODUCTION

Taeniasis in humans is a parasitic infection caused by the tapeworm species *Taenia saginata* (beef tapeworm), *Taenia solium* (pork tapeworm), and *Taenia asiatica* (Asian tapeworm). Humans can become infected with these tapeworms by eating raw or undercooked beef (*T. saginata*) or pork (*T. solium* and *T. asiatica*). People with taeniasis may not know they have a tapeworm infection because symptoms are usually mild or nonexistent. *Taenia solium* tapeworm infections can lead to cysticercosis, which is a disease that can cause seizures, so it is important seek treatment [1]. Parasitic infections, caused by intestinal helminths and protozoan parasites, are among the most prevalent infections in humans in developing countries [2,3]. In developed countries, protozoan parasites more commonly cause gastrointestinal infections compared to helminths. Intestinal parasites cause a significant morbidity and mortality in endemic countries [4]. *Taenia saginata* are the intestinal tapeworms for which humans are the only definitive hosts. An estimated 80 million people are colonized with beef or pork tapeworm. Humans become infected by ingesting raw or undercooked infected meat containing cysticerci [5]. Therefore *T. saginata* is found in many areas worldwide, but is most common in areas where consumption of undercooked beef is high [4,5].

The current case shows *T. saginata* in a 62-year-old female patient with no medical or surgical history, admitted for gastric adenocarcinoma.

2. CASE PRESENTATION

We report the case of a 62-year-old female patient with no medical or surgical history, admitted for gastric adenocarcinoma. Its extension assessment was negative. She received 3 pre-operative chemotherapy courses and sent for total gastrectomy. Surgical exploration revealed a resectable gastric tumor without hepatic metastasis or peritoneal

carcinosis. The enterotomy for restore continuity objectified the fortuitous discovery of a parasite type *tænia saginata* in the small bowel (Fig. 1). The patient was applied on praziquantel at a dose of 10 mg/kg.

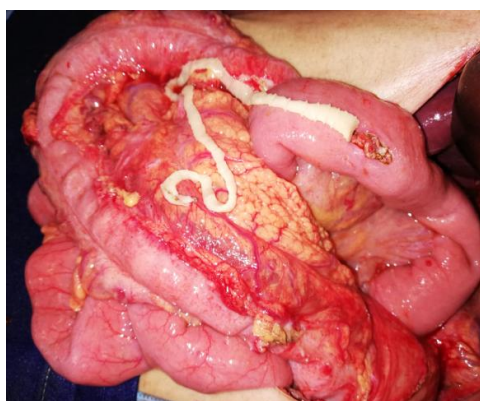


Fig. 1. Per operate image showing *Taenia saginata* after enterotomy in the small bowel

3. DISCUSSION

Tapeworms are flatworms that can live as parasites in the human gastrointestinal tract. *Taenia saginata* are the intestinal solitary tapeworms for which humans are the only definitive hosts. She is found in many areas worldwide, but is most common in areas where consumption of undercooked beef is high. Most people colonized with adult *T. saginata* are asymptomatic; those with symptoms complain of mild abdominal discomfort, loss of appetite, or change in stool pat-tern. Occasionally segments can enter the appendix, common bile duct, or pancreatic duct and cause obstruction. The length of adult worm is usually 5 m; however, it may reach up to 25m. *Taenia* infection usually is diagnosed by identifying eggs or proglottids in the stool and cellophane- tape swab to detect eggs as early as about three months after infection. Eosinophilia and elevation of serum IgE may be present. Serological tests are not routinely performed. PCR based methods, providing definite diagnosis and species

discrimination. The most complications of taeniasis are including abdominal pain, obstruction, inflammation, and perforation of small bowel, appendix, and colon. The treatment is medical by antiparasitic (or dewormers) praziquantel type.

4. CONCLUSION

The case reports describes *T. saginata* in 62-year-old female patient with no medical or surgical history, admitted for gastric adenocarcinoma. It is concluded that Taenia infection usually is diagnosed by identifying eggs or proglottids in the stool and cellophane- tape swab to detect eggs as early as about three months after infection. The most complications of taeniasis include abdominal pain, obstruction, inflammation, and perforation of small bowel, appendix, and colon.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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