



Case Record of a Teaching Hospital in Karaj; A 35-Year Old Man With *Taenia saginata* Infection Treated With Niclosamide

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Abstract

Taenia saginata can cause severe health and economic problems particularly in areas where it is endemic. The disease caused by this cestode is related to poor sanitary conditions, inadequate hygiene, open defecation, inadequately cooked beef, and poverty. A 35-year old man found yellowish white tapeworm proglottids moving in his feces and consulted with the Department of Emergency, Shahid Rajaei hospital, Karaj, Iran. He complained of lower abdominal discomfort, anal itching, and something moving in the stomach. He was given wrong prescription. The patient had the history of eating undercooked beef. Herein we report a case of *T. saginata* infection based on an adult tapeworm recovery from the infection. The specific identification of the worm was based on standard procedures. Three months after expelling the tapeworm, the man felt better and returned to his normal life.

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Introduction

Gastrointestinal infections caused by parasites present a significant burden for public health particularly in poor communities.^{1,2} Among parasitic infections, *Taenia* species infection, particularly, *saginata* is worldwide in distribution, causing taeniasis in humans and has the greatest economic and medical importance.³

It seems that taeniasis is still present in rural areas of Iran, due to lack of meat inspection systems and sustainable education against this kind of infection. Herein we report a case presented with abdominal pain and frequent excretion of intestinal worm which was finally diagnosed with the parasite *Taenia saginata*.

Case Presentation

A 35-year-old man, from a rural area in Karaj, Iran, referred to the emergency department of a teaching hospital in Karaj with features of something moving in the stomach, abdominal discomfort, and anal itching. He had the history of an on/off severe increasing abdominal pain for 8 years, nausea, easy agitation, passing proglottids of worms in the stool, and elicited a diet history of beef consumption. During the previous years, he had been seen by different physicians and had been given various treat-

ments for stomachache and abdominal pain.

He had the following paraclinical test results on the day of admission: white blood cell (WBC)=7000 cells/mm³ (neutrophil=48.3%, lymphocyte=47.2%, monocyte=2.7%, eosinophil=1.7%), red blood cell (RBC)=5 700 000 cells/mm³, and hemoglobin (HB)=15.4 gr/dL. Other biochemical tests were in normal range except for alanine aminotransferase (ALT) which was 54 IU/L (higher than normal range up to 40 IU/L). Similarly, sonography was taken from liver, bile ducts, and urinary system in which bile ducts' slight inflammation was reported.

In this study, we reported a case of *T. saginata* infection based on an adult tapeworm recovery from the infection. The specific identification of the worm was based on standard procedures.⁴ Briefly, detection of *Taenia* species eggs was performed upon microscopic examination of stool sample (Figure 1). Six active proglottid chains were observed in stool. These gravid proglottides were mounted between two glass slides; then uterine lateral branches were counted. Proglottids were identified as *T. saginata* because there were 20 lateral uterine branches.

It is worth to note that the sonography of bile ducts revealed slight inflammation; however, HIV and HBS were suspected by physician. Therefore, firstly the physician

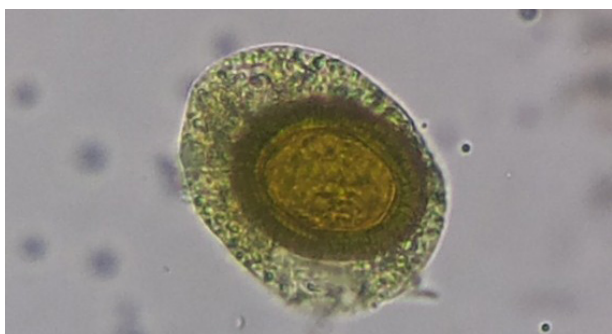


Figure 1. Ova of *Taenia* Excreted by Patient.

prescribed the patient a panel of tests for HIV and HBS; though, all of them were negative.

As reported in other studies, increased ALT enzyme is related to bile duct inflammation; therefore, the rise of ALT enzyme in *T. saginata* infection could increase the ALT.⁵ Finally, the patient was treated with niclosamide (2 g). At a follow-up visit 3 months later, the patient was asymptomatic, with recovery of appetite and other symptoms, and ova or proglottids were not seen in the stool sample.

By the way, taeniasis is one of the World Health Organization (WHO)-neglected parasitological diseases and continues as one of the public health burdens in most developing countries.⁶ Taeniasis refers to the intestinal infection with adult tapeworm, which is acquired by eating raw or undercooked beef or pork containing cysticerci.

In a study by Kia et al,⁷ the prevalence of *T. saginata* infection was reported to be 0.5%. According to this study, it was due to the consumption of inadequately cooked beef as a peculiar dietary habit. Our study was in line with the study of Kia et al.

Conclusion

To conclude, following the list of WHO on the interventions for control of taeniasis, the prevention, improved health education, improved sanitation, improved beef inspection, diagnosis processing, and appropriate treat-

ment and follow-up of taeniasis cases are strongly recommended, as the patient explained: “being infected with a parasite for 8 years was a very unforgettable experience for me as it was physically, emotionally, and financially exhausting.”

Authors Contributions

AH and EK designed the study and wrote the article. SS and MS performed the experiments. MHD, PF and MG analyzed and interpreted the data.

Ethical Approval

Written informed consent was obtained from the patient for the publication of this report.

Conflict of Interest Disclosures

None.

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