

Tapeworm Manifestation diagnosed Incidentally After Traumatic Fecal Fistula: A very rare case

Ajay Kumar Verma, Digamber Chaubey, Kanoujia Sunil, Gurmeet Singh

Senior resident, department of pediatric surgery, King George's Medical University Lucknow, UP, India

Correspondance Author: Ajay Kumar Verma, Senior resident, department of pediatric surgery, King George's Medical University Lucknow, UP, India**Conflicts of interest:** None to declare**Abstract:**

Taenia saginata infestation mainly occurs in intestine of human beings. A variety of species may be involved including *T. saginata* (Beef Tapeworm), *T. solium* (Pork tapeworm), *Diphyllobothrium latum* (Fish tapeworm). Tapeworm requires human host to live out their life cycles. There are few cases reported related to *T. saginata* infestation in literature. We are presenting an interesting case of poor, deaf and dumb, child with history of beef consumption who presented with traumatic fecal fistula of left side of upper abdomen through which large tapeworm was emerged during primary evaluation in emergency.

Keyword: Tapeworm, Cestode, Fecal fistula, Trauma.**Introduction**

T. saginata infections are mainly asymptomatic and most of the patients diagnosed incidentally. However, in symptomatic patients presented with non-specific complains like abdominal pain, anorexia, anemia, constipation, diarrhea and weight loss. Rarely manifest as serious complications like intestinal obstruction and perforation peritonitis.(1)

Tapeworms (*Taenia saginata*) are large cestode, which mainly infests the intestine after ingestion of viable cysticercus larvae after consumption of larvae with food products.(2) These infestation mainly encountered in developing countries, where maintaining proper hygiene is still an issue. Cattles are acting as intermediate host where

larval development takes place and humans as definitive host harvesting the adult worms. *T. saginata* transmitted to cattle through feces, contaminated fodder, and to the humans through uncooked beef.

Case report

A 10 year old dumb and deaf male child was admitted to our emergency ward with history of blunt injury abdomen 6 days ago, because of fall over bricks on ground while playing. He was presented with discharging parietal wall abscess over left side of abdomen with continuous low-grade fever for two days.

At the time of admission, vital was stable (PR 88/min, BP 112/58mmhg). There was blackish discoloration around discharging site with mild local tenderness and guarding. Rest of the abdomen was soft. His hemoglobin was 9.6gm%, total leucocyte count was 5800 mm³/cu mm with a differential count revealing 84% neutrophils, 06 % eosinophil's, 7% lymphocytes and 3% monocytes. The platelet count was 2.4X10⁴/cu mm. Other laboratory values were normal. Patient was planned for ultrasonography abdomen as further workup after local examination. The patient underwent local cleaning and dressing. At the time of procedure there was white color tapeworm seen with foul smelling fecal discharge suggestive of fecal fistula (Figure A). So only laboratory investigations were done. One tapeworm was extracted piecemeal (two parts) (Figure B & C). On performing

explorative laparotomy there was localized fecal collection with digested food residues around splenic flexure with partial transection of splenic flexure of colon (Figure D). Two other tapeworms were extracted through perforation site. Primary repair of perforation site with loop ileostomy was performed. Postoperative period was uneventful. The patient received a single dose of niclosamide (4×500 mg) postoperatively. Patient was discharged on day 8. Three months later, ileostomy was closed and patient was doing well for 3-month follow up. Parasitological evaluation confirmed *T. saginata*.

Discussion and Conclusions

This case report is the first case describing an incidentally diagnosed manifestation of a tapeworm via extrusion of worm through traumatic parietal wall injury wound – this type of presentation without any prior manifestation has not been described in the medical literature before.

T. saginata infection can be asymptomatic for a long period. Symptoms like weight loss, pain in the abdomen, vomiting, nausea, constipation or diarrhea and rarely cause complications like intestinal obstruction or perforation peritonitis [1]. Diagnosis may have been delayed in this case as the patient was deaf and mute which made communication difficulty. Taeniasis is usually treated with praziquantel (10- 20 mg/kg, single-administration) or niclosamide (2 gram single-administration). Surgery is recommended only for the treatment of complications.

There are a few distinct case presentations describing tapeworm infestations requiring surgery. In intestinal perforation, mortality may reach up to 42%. [3] A case of gall bladder perforation related to tapeworm infection reported in 2012 Hakeem et al. [4], similarly in 2011 Sozutek et al reported a case of colonic anastomotic leakage related to *T. saginata* infestation following a right

hemicolectomy procedure. (5) Another report describing a rare case of *T. solium* peritonitis with multiple ileal perforations was presented by Faheem et al [6].

The special feature of our case is blunt trauma abdomen causing necrosis and sloughing of bowel wall, which lead to fecal fistula formation, thus making diagnosis of tapeworm infestation easy.

In developing countries due to unawareness about health issue, parasitic infestations are still common. Worm infestation and its complication are one of major health problem, require special emphasis to treat timely and decrease complication rate and financial burden.

References

1. Dural A, Celik M, Temizgonul B, Unsal M, Akarsu C, Gonenc M et al. Unusual clinical case: extraluminal manifestation of a tapeworm from the eviscerated midline incision in a post-surgery patient. *The Journal of Infection in Developing Countries*. 2015;9(04).
2. García H, Gonzalez A, Evans C, Gilman R. *Taenia solium* cysticercosis. *The Lancet*. 2003;362(9383):547-556.
3. Chopde N, Daroka A, Chopde V. TAENIA INDUCED ILEAL PERFORATION AND PERITONITIS – A CASE REPORT. *IJSMR*. April, 2014;1(1)
4. Hakeem S, Rashid A, Khuroo S, Bali R. *Taenia saginata*: A Rare Cause of Gall Bladder Perforation. *Case Reports in Surgery*. 2012;2012:1-3.
5. Sozutek A, Colak T, Dag A, Turkmenoglu O. Colonic anastomosis leakage related to *taenia saginata* infestation. *Clinics*. 2011;66(2):363-364.
6. Md K Faheem Ramesh Reddy, Nagaraja B et al, TAENIA INDUCED ILEAL PERFORATION AND PERITONITIS – A CASE REPORT. *J Biosci Tech*, Vol 3 (1), 2012;462- 465.

Figure legends:

- A. Tapeworm coming through abdominal wall wound site.
- B. & C. Tapeworm
- D. Partially transected splenic flexure of colon at mesenteric border.

