TAENIA INDUCED ILEAL PERFORATION AND PERITONITIS – A CASE REPORT

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ABSTRACT:

Taeniasolium induced ileal perforation is an unusual case of acute abdomen with confusing and non-specific clinical picture. This is a very common parasite in Tropical areas of the world, where pig rearing and unhygienic environment persists. The parasite causes diseases, Taeniasis (intestine) and Cysticercosis (Nervous System), which may result in variable outcomes. We present here a case report of Taeniasolium Peritonii with multiple ileal perforations treated by resection and anastomoses.

Keywords:
Cysticercosis;  
Ileal perforation;  
Taeniasis (Taeniasolium)

1. INTRODUCTION:

Tapeworms – the natural habitat of these worms is in the human small intestine. The two common species which found are Taeniasolium and Taeniasaginata. Man is the definitive host for both. Pig and Cattle being intermediate hosts for T.solium and T.saginata respectively[1]. Intestinal obstruction and perforation as such, is commonly caused by Ascaris lumbricoides (Round worm)[2]. Other worms like Enterobius vermicularis (Pin worm); Trichuristrichura (Whip worm) and Taeniasolium (Tape worm) can also rarely cause a similar picture[3]. In our review of past literature, there were very few cases of intestinal perforation due to parasites. T.solium is definitely an exceptional cause of perforation of the small intestine. We present here a rare and interesting case of Taeniasoliumperitonii with multiple ileal perforations.

2. CASE HISTORY:

A 40 year old male, was brought to an emergency department with complaints of pain abdomen and vomitings. There was minimal distension of the abdomen. The pain abdomen aggravated from the past 6 hours. There was a history of fever, diarrhea, nausea and vomitings since two weeks. The patient was a lorry driver by occupation and a known non-vegetarian. There was a history of intake of pork and beef also. On examination – there was distension of abdomen, diffuse tenderness, rigidity, guarding, bowel sounds were absent. Thus, the patient was diagnosed as a case of peritonitis due to hollow viscous perforation. Routine laboratory investigations showed Hemoglobin – 9.2 gms%; Total Leucocyte Count – 15,000/cu.mm; Differential leukocyte count showed relative neutrophilia; Erythrocyte sedimentation rate – 12 mm/1st hour; Random blood sugar, Blood urea, Serum creatinine and Serum electrolytes showed values within the normal range. Chest X ray PA view showed gas under the right dome of the diaphragm. An emergency exploratory laparotomy was performed, which revealed multiple ileal perforations of varying sizes, with worms projecting out of the perforations. Some segments of those worms were seen in the peritoneal cavity. The resection of the affected part with anastomoses of healthy areas was performed. A 12.5 cms of Ileum was resected and worms were cleared from the vicinity. Thorough peritoneal lavage was done, with 10% povidone iodine and abdomen was sutured in layers. The resected specimen along with the parasite was sent for histopathological examination. The patient was treated with broad spectrum antibiotics and intravenous fluids for one week. The general condition of
the patient improved and oral diet was tolerable, defecation was normal and healing status of the wound was good. Thus, oral Praziquantel 600 mg (10 mg/kg body weight) was prescribed and the patient was discharged on tenth post-operative day. He was advised to attend follow-up clinic once in a fortnight.

The specimen received showed, Ileum of 11.5 cm length with four perforations at different places and a single tape worm inside the lumen of the intestine, projecting out from the perforation at one end. The worm measured around 45 cms and was found to be cut at one end. The worm was segmented. The intestine was cut open and the worm was carefully removed, the head end of the worm (scolex) was identified. The intestine showed loss of rugosities in focal areas and numerous small ulcers throughout its length. An India ink preparation was done to observe the pattern of uterine tube in gravid proglottid, which showed seven uterine branches on each side and the scolex on histopathological examination showed suckers with a row of hooks over the Rostellum. Thus, the parasite was reported as Taeniasolium. The histopathological examination of the perforated area showed all the layers of ileum infiltrated by numerous inflammatory cells and focal areas of necrosis.

3. DISCUSSION:

Taeniasis and Cysticercosis are not uncommon in tropical areas. It is a ubiquitous disease occurring wherever pigs and humans existed in association and is probably of great antiquity: Aristotle gives a clear description of the condition in pigs[1]. Cysticercosis was first described by Aristophanes and Aristotle in the 3rd century B.C. Later it was noticed in humans by Parunoli in 1550. It was also described in ancient Indian Medical book, the CharakSanhita[4]. The parasite has long since been eradicated from the most developed countries, but it still remains common in central and south America, South Asia and China, with patchy distribution in Africa[1]. The disease is known to be caused by ingestion of undercooked/measly pork in areas lacking basic sanitary facilities and by ingestion of vegetables whose growth is fortified with sewage. All biological markers for transmission of T.solium exist in India. But, due to under reporting and lack of systemic population based studies the problem is being overlooked and neglected. Thus, a varied prevalence was notified in various states. There were very few cases from Kerala where the rate of education and standards of hygiene is high and Jammu & Kashmir, a Muslim majority state due to prohibition of pork consumption by the religion. This is the reason why, it is very rare in Islamic countries[4].

Cysticercosis is a highly studied disease compared to Taeniasis. The review of literature showed extensive research material regarding Cysticercosis. The studies regarding Taeniasis are very limited. This is an equally important disease as most of the patients end up with several surgical complications with high morbidity and mortality[5]. A small bowel perforation caused by T.solium cannot be distinguished from other acuteabdomen conditions, especially in elderly patients[6]. The most common cause of Intestinal perforation worldwide is Typhoid fever with intestinal ulceration[7]. In the present case also the clinical picture was similar to that of Salmonella infection. The mortality rate in small intestinal perforation due to infestation may reach up to 42% mostly related to primary disease of the patient[8]. T.solium is a ribbon like, segmented flat worm residing in the small bowel of man. It has a scolex (head); neck and numerous proglottids which have the independent reproductive capacity[9]. The terminal half of the parasite consists of mature gravid segments.
The adult worm resides in the upper jejunum and may live for decades[10]. The T.solium – scolex shows four suckers and numerous hooks, whereas T.saginata shows only suckers. T.solium gravid segment shows 7-12 lateral uterine branches on each side; T.saginata shows 15-20 uterine branches on each side[9]. In our case, there were suckers along with hooks and seven lateral uterine branches on each side.

The incidental presence of tapeworms in the bowel lumen contributes considerably to the bowel perforation in doubt full cases, a diagnostic laparotomy should be done and the patient is observed for a minimum of six months to one year, as a small piece of viable neck or scolex can regenerate into a new worm. The treatment of choice is a single dose of Praziquantel 10-20 mg per kg body weight or Niclosamide 2 grams as a single dose[11,12].

This case report is being presented as a rare case of intestinal perforation due to T.solium. A similar case(s) was reported by O.T Abu Salem et al[5], R.B. Singh et al[13], Khan et al[3], Narayan Srihari et al[14].

4. CONCLUSION:

The cases presenting with pain abdomen, guarding in endemic areas should be
evaluated for Taenia and meticulous search must be done to trace the parasite if any.

The awareness regarding the disease and complications of the disease is to be enlightened to the society. The safe sanitary practices and hygienic food habits are to be encouraged, especially in people of low socioeconomic status. Always - prevention is the best and the cure is just good enough. Thus, population based studies are to be undertaken with emphasis over the modes of prevention regarding Taeniasis/Cysticercosis.

5. REFERENCES: