Case Report

A rare cause of nasogastric tube obstruction

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Case report

A 50 years old lady presented with small bowel obstruction. She had a previous pelvic surgery and therefore, the diagnosis was adhesive small bowel obstruction. A nasogastric tube was inserted for decompression of the stomach and aspiration of its content. After many sessions of aspiration of the stomach content the tube got blocked and no further aspiration was possible. The decision was to do a laparotomy in view of unrelieved obstruction. In the theatre and under anesthesia, we retrieved the tube and we found that it was blocked by a long tapeworm (Taenia Saginata) (Fig 1).

Fig 1: Long tapeworm (Taenia saginata)

Keywords: nasogastric tube, tapeworm

Introduction

Placement of nasogastric tubes (NGTs) for gastrointestinal decompression is routine in the management of patients with small bowel obstruction. Obstruction of nasogastric tube can occur due to many causes, but some of the extremely rare causes should be considered especially in areas where rare causes like helminthes infestation should be considered.

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The cause of the bowel obstruction was found to be adhesions due to previous pelvic surgery. The bowel was viable; so adhesion were released and the patient had an uneventful postoperative course. The patient was given praziquenotel, a broad spectrum antihelmenthic drug.

Discussion
Rare causes of nasogastric tube obstruction were reported due to many reasons like self knotting\(^{(1)}\) of the tube and ascaris lumbricoides\(^{(2)}\). Taenia saginata is a common tapeworm in Sudan. Man is a known sole definitive host and is usually infected with one tapeworm. The worm can reach up to 6 meters length. The eggs are passed in stools when the gravid proglottids drop from the strobila and either rupture in the intestine allowing the eggs to pass in the stools or pass intact. The intermediate host is cattle that swallow the eggs and the larva cysts develop in the tissues. Man is infested when ingesting poorly cooked meat.

Surgical complications of intestinal worms are generally very rare. Ascariasis commonly presents with abdominal complications in children. The incidence of surgical complications is directly related to the parasite mucosal interaction, being less with taeniasis and more with ascaris. Taeniasis was reported to cause small bowel obstruction, and colonic perforation in very rare situations. Also taeniasis was reported to cause colonic anastomotic leak\(^{(3)}\) and oesophageal anastomotic leak\(^{(4)}\). However, upward migration of the worm to the stomach is unlikely. This is mainly due to the high gastric acidity. However, following intestinal obstruction, bile and pancreatic juice reflux might have changed the environment and allowed such migration. Then the tapeworm feeds itself in the opening of the tube as in our case. In an experimental work, rats infected with taenia worms led to retardation of gastric secretion and hypergastrinemia\(^{(4)}\). The most common serious complication of adult tape-worm infection is appendicitis. Other reported complications include intestinal obstruction, obstruction of bile ducts or pancreatic duct, abnormal vaginal bleeding\(^{(5)}\) and rarely anastomotic leak. Taeniasis invades the upper small bowel in humans. It is very unusual to see this parasite in the stomach. Nasal expulsion of taenia saginata was reported after repeated vomiting\(^{(6)}\). However, nasogastric tube occlusion was not reported previously.

Although tapeworms (Taenia saginata) inhabit the small bowel, under certain circumstances it migrates upwards to cause rare complications like oesophageal anastomotic leak and nasogastric tube occlusion. From this report tapeworm should be considered as a potential cause of nasogastric tube occlusion in tropical areas.

References