

## Ascaris lumbricoides and Duodenal Perforation : A Case Report.

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**Abstract:** Ascariasis is one of the most common parasitic illnesses in human beings worldwide. The physicians treating patients with ascariasis should be aware of the abdominal complications, since a delay in its management may have fatal outcome. Ectopic locations of the adult worm are a source of diagnostic confusions. Perforation of the gastrointestinal tract is common cause of peritonitis. In most instances, this perforation is caused by peptic ulcer, acute appendicitis, acute suppurative cholecystitis, or trauma. Gastrointestinal perforations resulting from ascariasis is a rare but distinct entity. We came across a patient, 24 years old male, who presented with severe abdominal pain and features of peritonitis. On laparotomy, duodenal perforation was found and ascaris lumbricoides adult worm was found free in the peritoneal cavity. It is suggested that heavy infestation with ascaris lumbricoides makes a diagnosis of intestinal perforation more likely in a patient with an acute abdomen.

**Keywords :** Ascariasis, perforation, peritonitis

### INTRODUCTION

Ascariasis is one of the most common helminthic disease in humans<sup>1</sup> occurring mostly in countries with low standard of public health and hygiene, thereby making ascariasis highly endemic in developing countries<sup>2</sup>. In endemic areas 30% of adults and 60-70% of children harbour the adult worm<sup>3</sup>. Complications are not uncommon because of the wanderlust of the worm. Ascaris normally infests the small bowel with occasional migration of the adult worm into the biliary and pancreatic ducts, portal venous systems or the abdominal cavity, thereby causing ectopic forms of the disease<sup>4,5</sup>. Ascariasis can cause serious intra abdominal complications such as intestinal obstruction, cholangiohepatitis, biliary obstruction, liver abscess, pancreatitis, acute appendicitis, intestinal perforation and granulomatous peritonitis. Intestinal obstruction is most common complication<sup>6</sup>. The surgeon or physician treating patients with ascariasis should be aware of the abdominal complications, since a delay in management may have fatal outcome<sup>7</sup>. Perforation of the gastrointestinal tract is common cause of peritonitis. In most instances, this perforation is caused by peptic ulcer, acute appendicitis, acute suppurative cholecystitis or trauma. Gastrointestinal perforation resulting from ascariasis was suggested by Ovnatian in 1959 to be a distinct entity. This is a report of a rare case presentation of ascaris lumbricoides with duodenal perforation.

### CASE REPORT

A 24 years old adult male patient was admitted in our hospital with chief complaints of severe abdominal pain for last five days and vomiting and fever for three days. Patient had no history of smoking, he was non alcoholic was not a known diabetic or hypertensive. He had a positive history of passage of altered coloured blood in stools for many years since his childhood. The physical examination showed evidence of malnutrition, mild dehydration and tachycardia. On abdominal examination, there was diffuse tenderness all over the abdomen and guarding was present. On auscultation bowel sounds were absent. Other systems were normal. Laboratory investigations including complete blood analysis, blood urea, random blood sugar, serum creatinine, serum electrolytes, chest x-ray, ECG were done and found to be normal. X-ray examination of the abdomen in sitting position was done and it showed presence of free air under the domes of diaphragm. Patient was taken up for exploratory laparotomy,

which was done under general anaesthesia with endotracheal intubation. Abdomen was opened through a midline incision and on exploration it was found that stained intestinal contents in the bile were present in peritoneal cavity. On further exploration perforation of first part of anterior wall of duodenum was found, standard omental patch repair was done by passing three sutures. Upon lavage of peritoneal cavity an adult worm of ascaris lumbricoides was found in the peritoneal cavity, which was taken out of peritoneal cavity and measured and found to be 25 cm in length it was stored in a jar (picture 1). Thorough peritoneal toilet was done with normal saline and abdomen closed in layers over a drain. Patient was kept on intravenous fluids and triple antibiotic cover was given. Post operative period was uneventful and recovery was good and patient was discharged after suture removal after 7 days.



### DISCUSSION

Ascaris is the earliest recorded human helminth and has a worldwide distribution being prevalent especially in the tropics such as China, India, Bangladesh and South East Asia. Of the clinical diseases which ascariasis cause in human beings, we come across intestinal obstruction, intussusception, ulcer perforation, appendicitis and rarely migration.

Perforation of hollow viscus by an adult worm is well known to tropical surgeons. Two types of intestinal perforation by normal worms are recognized, the primary and the secondary. In the primary type the worm perforates through healthy intestine, while in the secondary type there is associated intestinal disease like enteric fever, or a weakness in the intestinal wall. In primary perforation, it has been suggested that the worm produces a lytic secretion and this

combined with the nibbling effect of the head of the worm can lead to perforation of the normally impenetrable bowel wall<sup>8</sup>.

Intraperitoneal tumoral ascariasis results when the perforation is sealed spontaneously. This situation may be self limiting without recourse to emergency surgery. Destruction of the larvae and the adult worm is usual, but eggs are resistant and result in a specific granulomatous reaction. The presence of viable ascaris eggs suggest that they were deposited on site prior to female adult worm destruction<sup>9</sup>.

Ascaris perforation may cause acute diffuse peritonitis, usual symptoms in these patients are abdominal pain and vomiting. Abdominal pain is present in almost all cases with vomiting found in 80% cases and fever in 16% cases. 70% cases usually have typical signs of peritoneal irritation, including tenderness, rebound pain and guarding<sup>10</sup>.

It is suggested that signs of infestation with ascariasis lumbricoides make a diagnosis of intestinal perforation more likely in a patient with an acute abdomen. Ascaris has a propensity to migrate from its usual habitat, duodenum, to other areas. It is because of tendency of the adult worm to migrate that even a single worm can cause serious sequelae. Wandering worms may move to any organ of the gastrointestinal system including liver, biliary tract, gall bladder, pancreatic duct, appendix, or to the peritoneal cavity. They may come out of the anus, mouth or nose. The worm may move to the peritoneal cavity through intestinal ulceration or may itself perforate

the intestine. The female worm lays eggs which produces a granulomatous inflammation, and itself dies leading to a large abscess, which presents as a tumour like mass in the abdomen, peritonitis associated has a high morbidity and mortality. Surgical intervention is the treatment of choice.

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## Case Report

### Radiological Features in Actinomycosis of Paranasal Sinus region and Base of Skull with Oro-antral fistula.

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**Abstract:** Actinomycosis of paranasal sinus region occurs rarely. It's a clinical and diagnostic dilemma associated with significant morbidity. If untreated it can spread to the base of skull and lead to fistula formation. Computed tomography scan (CT) can reveal the type and extent of disease but the definitive diagnosis is by demonstration of actinomycetes on histopathology. The authors report a rare case of actinomycosis of the paranasal sinus region spreading to the base of skull with formation of oroantral fistula; CT scan findings, differential diagnosis and review of literature, has been discussed. **Key words:** Actinomycosis, paranasal sinus, oroantral, fistula

## INTRODUCTION

Actinomycosis is caused by actinomycetes israelii, a commensal bacteria harboring human oral cavity usually around teeth and tonsillar crypts. Its pathologic potential is minimal in normal individuals but is enhanced by trauma resulting in disruption of mucous membranes<sup>1,2</sup>. Out of the three forms; cervicofacial, thoracic and abdominal, the cervicofacial type occurring in form of soft tissue abscess and draining cervical fistulae is the commonest. Sinonasal, laryngeal and pharyngeal disease due to actinomycosis is rarely encountered<sup>1,3</sup>. Actinomycosis involving the base of skull has not been described in the medical literature.

## CASE REPORT

A forty years old female with complaint of foul breath and purulent discharge in the oral cavity since 3-4 months visited our department for computed tomography (CT) scan of the nasal and paranasal sinus region. Patient gave the history of tooth extraction in the molar region of maxilla on left side 8-9 months back. Local examination of oral cavity revealed periodontal disease, multiple carious tooth and presence of communication between the oral & nasal cavity on left side with purulent discharge. No evidence of any external abnormality was noted in the facial region. Laboratory examination was unremarkable. Chest radiograph and ultrasonography of abdomen

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