



ASCARIASIS – A NOTORIOUS CASE OF INTESTINAL PERFORATION.

Emergency Medicine

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ABSTRACT

Ascariasis, a common tropical helminthic infection caused by *Ascaris lumbricoides*, spreads via contaminated food and water. It usually causes complications like rectal bleeding, intestinal obstruction, Here we report a 34-year-old male came to the Emergency Medicine Department (ED) with abdominal pain and vomiting, diagnosed with perforation peritonitis and was found later to be caused by *Ascaris*.

KEYWORDS

Ascariasis, Intestinal Perforation, Emergency Department.

INTRODUCTION

Ascariasis, a prevalent helminthic infection in tropical climates ⁽¹⁾, is mainly transmitted through ingesting soil or water containing *Ascaris* eggs. While many infected individuals show no symptoms, some develop pneumonitis, abdominal discomfort, and loss of appetite, vomiting, and diarrhoea. Complications like intestinal bleeding, cholecystitis and obstruction are quite common ^(2,3). Exceptionally rare complication is gastrointestinal perforation caused by ascariasis. This report discusses a unique case where an individual suffered from a distal ileal perforation because of ascariasis.

Case Report

A 34 year old male patient presented to ED in restless state with complaints of abdominal pain and vomiting since past 2 days. After initial 10 second assessment in ED, he was triaged to yellow area.

Primary Survey

- Airway- He was able to phonate well, no pooling of secretions in mouth.
- Breathing- Spontaneous breathing, RR-20/min, SpO₂- 99% on room air, air entry bilaterally equal, no abnormal sounds on chest auscultation.
- Circulation- PR-120/min, BP- 70/50 mmHg, peripheries were turning cold.

Intervention-

2 large IV cannulas (16 G) were inserted and fluid resuscitation was started, Cardiac and BP monitors were attached, nasogastric tube insertion and Foleys catheterisation done.

Disability-

GCS- E4V5M6, GRBS-132mg/dl, pupils bilaterally equal and reactive to light, no focal neurological defects were noted.

Exposure-

Body temperature – 37°C, patient was covered with blankets to prevent hypothermia.

Primary Adjuncts

1. ECG- Sinus tachycardia.
2. CBC- Hb- 11g/dl, WBC-12,500/mm³ with predominant neutrophilia, Platelets- 2,00,000/mm³.
3. Serum Electrolytes- S.Na⁺-140 mEq/L, S.K⁺- 4.3mEq/L, S.Mg²⁺- 1.8 mg/dl, S. Ca²⁺- 9.2 mg/dl.
4. Bedside Ultrasonography - Fluid collection in the pouch of Douglas.
5. Portable X-ray Chest – Air under the right dome of diaphragm.



6. Widal test – Negative.

Provisional Diagnosis – Perforation Peritonitis.

Initial Management

1. Fluid resuscitation was continued.
2. Inj. Piptaz 4.5g IV and Inj. Metronidazole 400mg IV were started as empirical antibiotics.
3. Surgery consultation was done.

Secondary Survey

- Signs and Symptoms- Patient gave a history of abdominal pain since the past 2 days, central in location, persistent type and moderate intensity. It progressed to become severe intensity which was worsened by body movements. It was accompanied by 3 episodes of vomiting on the presenting day which was projectile, bilious type. No history of associated fever, loose stools, history of food intake from outside and abdominal distension.
- Allergies- No history of any allergies.
- Medications- Not on any medications at present.
- Past Medical and Surgical history- History of mild grade fever 1 week back, relieved on taking symptomatic treatment himself, occasional alcohol intake, no known comorbidities, No significant surgical history.
- Last meal- Lunch on the previous day.
- Events – Patient was directly brought to ER in morning after symptoms got worsened.

Systemic Examination

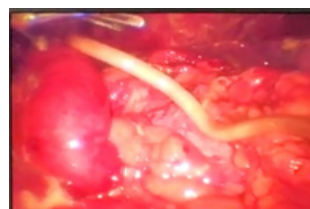
Gastrointestinal system

- Inspection – Shape of abdomen – normal, no dilated veins, scars, sinuses, swellings or discolorations.
- Auscultation – Bowel sounds were not heard.
- Palpation – Tenderness, rebound tenderness, guarding were present. No rigidity.

Respiratory, Cardiovascular, Central Nervous System were within normal limits.

Further Management

- The patient underwent an urgent diagnostic laparoscopy, where an 18cm *Ascaris* was discovered emerging from a perforation in the distal ileum. A subsequent exploratory laparotomy was done to remove worm. The gastrointestinal system appeared otherwise normal. The perforation was repaired using a Graham's patch, and intestinal tissue specimen was sent for biopsy and peritoneal fluid sent for analysis.



- Laboratory results identified the presence of *Pseudomonas aeruginosa* in the peritoneal fluid, which was susceptible to Piperacillin-tazobactam; however, the tissue biopsy was normal. Treatment included intravenous administration of Piptaz 4.5gm and Metronidazole 400mg, maintenance fluids, analgesics and anti-inflammatory agents. The post-operative recovery was uneventful, and the patient was discharged on the 15th day after surgery.

Final Diagnosis–

Perforation Peritonitis due to *Ascaris lumbricoides*.

DISCUSSION

Ascariasis is a common helminthic infections throughout the world, most commonly in the tropical areas. *Ascaris* enters the body through food contaminated with embryonated eggs. Adult worm usually get lodged in terminal small intestine like distal ileum. It is usually asymptomatic, but can often lead to complications like intestinal obstruction, bleeding^[4]. There are literatures depicting cases of intussusception due to *ascaris*^[5, 6]. A study showed case of pyloric obstruction by worm ball of *Ascaris*^[7].

Complication of intestinal perforation as a result of ascariasis in an otherwise healthy person were showed by two studies^[8,9]. This was in line with our findings as the patient's gastrointestinal system was otherwise normal.

CONCLUSION

The case report reveals that *Ascaris lumbricoides* can cause intestinal perforation even in individuals with no prior health issues, highlighting the helminth's potential for severe gastrointestinal complications. It also highlights the importance of regular deworming practices.

Conflicts Of Interest - Nil

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