

# **A RARE CASE OF ILEAL PERFORATION**

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# INTRODUCTION

- Ascariasis is a prevalent parasitic disease caused by the roundworm *Ascaris lumbricoides*.
- Its endemic in the under-developed countries; and occurs in all age groups but is more prevalent in pre-school children.
- Although mostly a chronic disease, it may manifest as an acute abdomen.

- o Presenting as acute appendicitis, acute peptic ulcer, acute cholecystitis, acute pancreatitis, intestinal obstruction, acute peritonitis and acute pyelonephritis.
- o Intestinal obstruction is the most serious and lethal known complication causing severe mortality.

## CASE DETAILS

- o A 2 year old boy presented with signs and symptoms of intestinal obstruction.
- o The plain erect abdominal X-ray showed multiple air fluid levels.
- o Ultrasound abdomen revealed dilated bowel loops with the presence of worm balls and free fluid in the peritoneal cavity.

- o Patient underwent an emergency exploratory laparotomy which revealed worm bolus of Ascaris helminths in the small bowel causing closed loop obstruction, necrosis and perforation in the distal ileum and peritonitis.
- o Boluses of roundworms were present from the duodeno-jejunal junction upto the colon.
- o About 15 cm from the IC junction ileum was perforated and approximately 10 cm length of ileum proximal to it was gangrenous.

- o Resection of the gangrenous ileal segment along with the perforation was done, milking of all the worms was done, a thorough peritoneal lavage was given and a double-barrel ileostomy was performed.
- o Broad spectrum antibiotics and Anti-helminthic drugs were started postoperatively.
- o Histo-pathological report stated severe Ascaris infestation with acute necrotizing ileitis.



Gangrenous distal ileal segment with the perforation and Ascaris worm bolus at the perforation site.

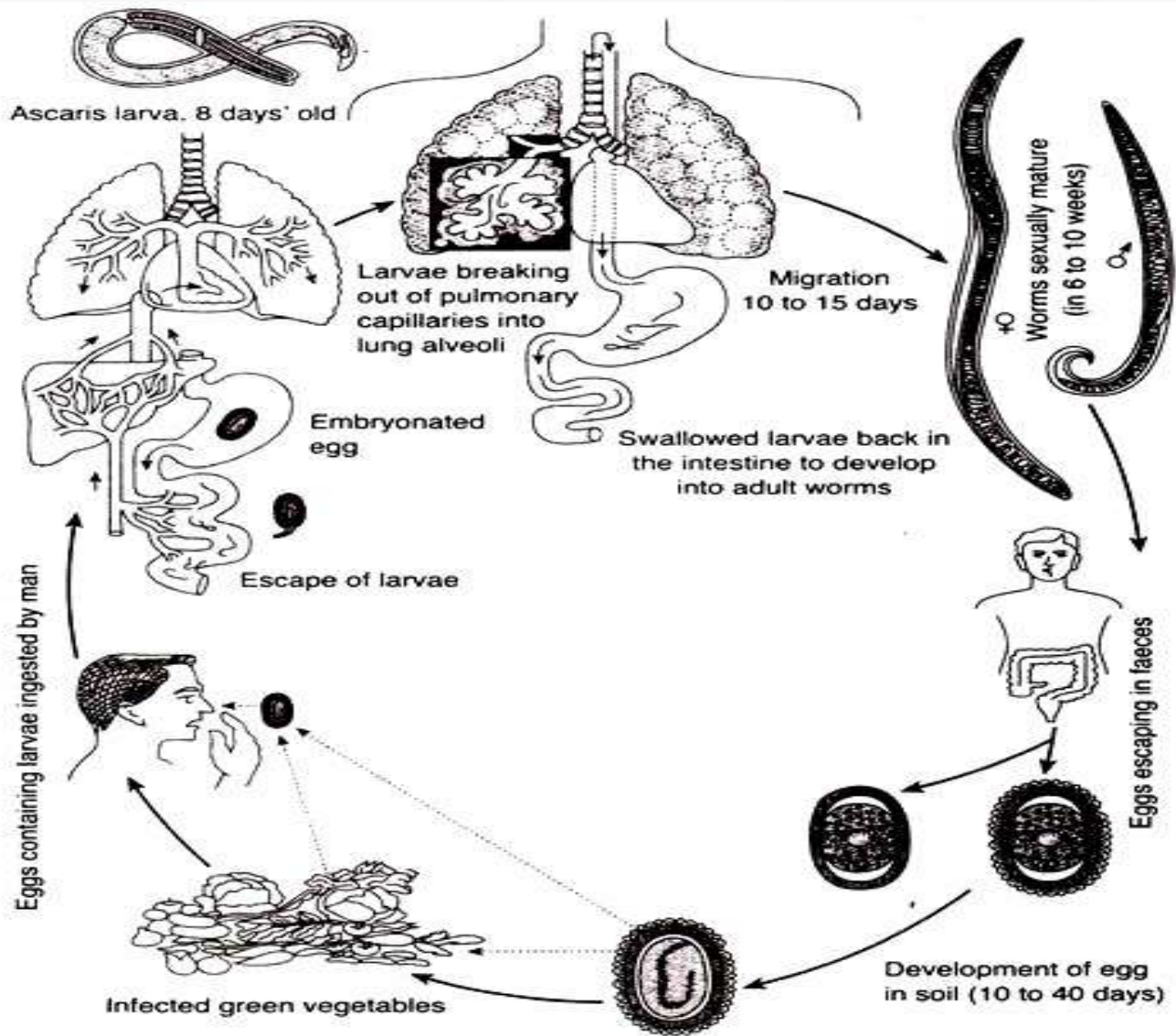
- o The post-operative course was uneventful and patient was discharged and kept on regular follow up.
- o After adequate weight gain and improvement in general condition and nutrition, the child underwent ileostomy closure.
- o Stool examination on regular follow up showed no *Ascaris* eggs or worms.



## DISCUSSION

- *Ascaris lumbricoides* occurs most frequently in the developing countries where sanitation is poor.
- The mode of infection is by ingestion of embryonated eggs in raw vegetables, or faecal-contaminated water or soil.
- The fertilized eggs hatch in the intestines and release larvae which penetrate the intestinal wall to enter the blood stream, pulmonary circulation and the alveoli.
- When the larvae are coughed up by the host, they are swallowed back into the intestine to develop into adult worms.

Larvae boring through intestinal mucosa – carried by portal circulation to liver and via right heart entering lungs



Life cycle of *Ascaris lumbricoides*.

## DIAGNOSIS

- o Mostly children with *Ascaris* infection are asymptomatic with chronic disease leading to severe malnutrition.
- o The symptoms occur due to larval migration or adult worm stage in the intestines.
- o Abdominal discomfort, anorexia, nausea, diarrhoea, intestinal obstruction, massive GI bleeding and ulceration, perforation and gangrene of bowel; acute pancreatitis, cholecystitis, liver abscess, acute appendicitis, Loefflers pneumonitis.
- o Eggs or worms may be seen passed in the stool or on stool examination.

There are two main hypotheses concerning the causation of small intestinal perforation in Ascariasis :-

1. Preexisting intestinal ulcers.
2. Toxins released by the worms.

# IMAGING

## o XRAY ERECT ABDOMEN

Long negative intraluminal illustrations with a 'whirlpool pattern.'

## o ABDOMINAL ULTRASONOGRAPHY

It can alone diagnose intestinal obstruction and it depicts worms as multiple, elongated, parallel echogenic strips without acoustic shadows - "railway track" sign on longitudinal scan and "target" sign or "bull's eye" sign on transverse scan.

## o CT SCAN OF THE ABDOMEN AND PELVIS

## o CAPSULE ENDOSCOPY

# TREATMENT

## o CONSERVATIVE -

Antihelminthic drugs like Albendazole, Mebendozole, Ivermectin and Pyrantel Pamoate are given when patient is diagnosed alongwith other symptomatic and supportive treatment.

## o SURGICAL -

Exploratory laparotomy is required when patient presents with intestinal obstruction or perforation.

Depending on the viability of the bowel appropriate surgical management is done.

## CONCLUSION

- Round worm bowel obstruction should be considered as the first differential diagnosis in any patient of intestinal obstruction in an endemic area.
- Although most cases are managed conservatively, many patients still need surgical intervention.
- Periodic deworming of the patient as well as siblings and other family members should be done.
- Efforts to eradicate the disease through health education, proper sanitation and hygiene and use of antihelminthics.



**THANK YOU**