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Case Report

A rare case of acute pancreatitis due to roundworm infestation

Anant Parasher*

Department of Medicine, Guru Teg Bahadur Hospital, New Delhi, India

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***Correspondence:**
Dr. Anant Parasher,
E-mail: anant02jan@gmail.com

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ABSTRACT

Roundworm or Ascaris lumbricoides is one of the most common parasitic infestations of the human gastrointestinal tract occurring particularly in tropical and temperate countries having hot and humid conditions. On rare occasions, it may invade the biliary tract and the main pancreatic duct causing obstruction and leading to acute pancreatitis. Here, a similar case is presented of a patient who presented with symptoms of acute abdomen and vomiting, with imaging suggestive of roundworm infestation in the main pancreatic duct and who later improved with supportive care.

Keywords: Acute Pancreatitis, Ascaris, Biliary tract, Infestation

INTRODUCTION

Roundworm or Ascaris lumbricoides is one of the most common parasitic infestations of the human gastrointestinal tract particularly in tropical and temperate countries having hot and humid conditions. Infestation with Ascaris lumbricoides causes about 20,000 deaths every year,[1] usually as a result of intestinal obstruction and infant malnutrition.[2] Poor sanitation is the most important risk factor in majority of the cases.[3] Whereas intestinal ascariasis generally does not cause any severe problems as it is mostly asymptomatic, on rare occasions the roundworm may invade the biliary tract and the main pancreatic duct causing obstruction and leading to acute pancreatitis and ascending cholangitis. That being said, these are very rare complications.[4-6]

CASE REPORT

A 36-year-old female presented with sudden upper acute abdominal pain which was severe in intensity, colicky in nature and with radiation to the back. The Patient had multiple episodes of vomiting which was non-projectile with no history of any similar episodes in the past. In the emergency department she was treated with Intravenous Pantoprazole which provided some symptomatic relief. On physical examination, the patient was afebrile with a blood pressure of 106/72 mmHg and a pulse rate of 112/min. On Per-abdomen examination, there was epigastric tenderness without any guarding or rigidity, and the bowel sounds were normal.

A complete blood count demonstrated normal leukocyte count of 7200/mm^3, normal liver enzymes with elevated serum amylase (1230 IU/l) and serum lipase (3622 IU/l). Ultrasonogram of the abdomen revealed a round worm in main pancreatic duct (Figure 1 and 2 and 3). The pancreas was visualized throughout and it appeared bulky with a hazy outline and had minimal peripancreatic collection. The gallbladder and common bile duct lumen were normal. Round worms were seen in the small bowel.

Stool testing for parasites and ova were negative. Abdominal computed tomography (CT scan) showed dilated common bile duct (0.8 cm in diameter). She was initially diagnosed with acute mild gallstone pancreatitis with suspected retained common bile duct stone in view of the clinical manifestations. Endoscopic Retrograde Cholangiography (ERCP) was performed which was

suggestive of a swollen ampulla with purulent bile. The patient was managed conservatively. She was kept nil orally and a Ryle's tube was inserted. An intravenous line was setup and she was given 3.5 liters of intravenous fluids per day with mostly normal saline and ringers lactate. Analgesics and antispasmodics were given as and when the patient required.

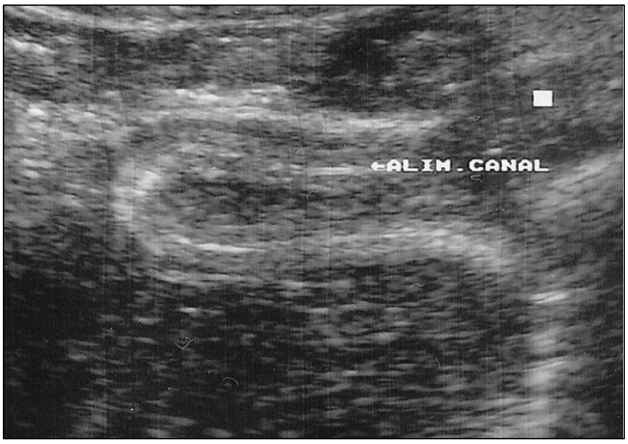

Figure 1: USG Abdomen showing Roundworm in the alimentary tract extending up to the MPD.

Figure 2: USG Abdomen showing a bulky pancreas.

The leukocyte count, AST, ALT, bilirubin and amylase returned to normal within two days. The patient was prescribed with ceftriaxone 2 g I/V once daily for prophylactic antibiotic cover. Although no eggs were found on repeated stool examination, Tablet Albendazole 400 mg once daily was prescribed for three days in case that there was still a male or an immature female parasite. Finally, this patient had a complete recovery and was discharged home within 7 days. Follow-up ultrasonogram done two days after relief of symptoms, was suggestive of a normal pancreas and a worm free main pancreatic duct. Patient was discharged on 7th day of admission with pancreatic enzymes, proton pump inhibitors, diet restriction and a repeat dose of albendazole after 14 days. Follow-up ultrasonograms in OPD were normal.

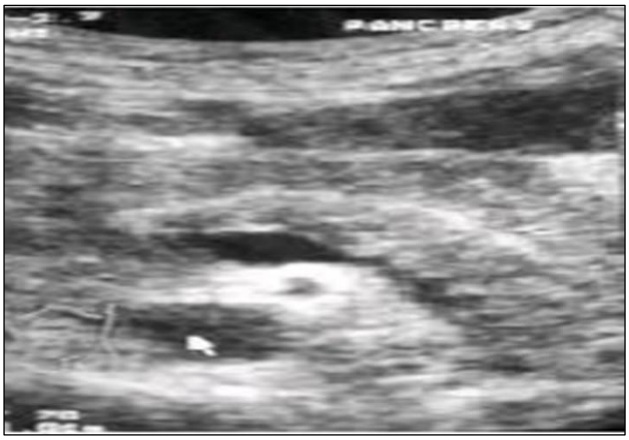

Figure 3: USG abdomen showing dilated main pancreatic duct and minimal peri-pancreatic fluid collection.

DISCUSSION

A. lumbricoides is the most common helminthic infection in humans and occurs when Ascaris eggs are ingested from infected soil, food, or water. Larvae emerge in the duodenum and then migrate to the caecum, where they access veins of the portal system and are transported to the liver. From the hepatic veins, larvae pass to the heart and lungs. The roundworms are actively motile and can migrate from their natural habitat in the duodenum and proximal jejunum into the ampulla of Vater and enter the bile duct or pancreatic duct. Some complications such as biliary colic, cholangitis or pancreatitis might occur and depend on the parasitic load. Fortunately, biliary complications are not frequent. However, these can cause severe morbidity and mortality. Therefore, early diagnosis and management are essential. The worms can move freely in and out of the hepatopancreato-biliary tree and therefore can be easily missed. Stool studies may show Ascaris ova and dead worm; parasite detection by stool examination for ova may approach 100%.

The diagnosis is usually made by abdominal ultrasonography which shows bile duct dilation and the presence of the parasite, a hyperechoic linear structure with a hypoechogenic line inside, which is sometimes motile.[3,7,8] Only 5 to 12 percent of eosiniphilia has been reported in extrapulmonary ascariasis. Stool testing is the most important method in the diagnosis of ascariasis but yields false negative results about 80% in biliary ascariasis. ERCP is the gold standard method for identifying and removing the parasite from the duodenal, biliary or pancreatic tract.[3] Görgül et al. reported a case of biliary ascariasis in which it was removed by balloon extraction after endoscopic sphincterotomy. This procedure is feasible and harmless in the treatment of biliary ascariasis and ERCP with parasitic extraction has been reported successful in up to 90% of the patients with biliary ascariasis.[1,9] Management of biliary ascariasis consists of administration of intravenous fluids, broad spectrum intravenous antibiotics indicated if signs of

cholangitis presented and early intervention with ERCP followed by antihelminthic medication will reduce morbidity and mortality including recurrence rate in the future.[10-12]

CONCLUSION

In conclusion, Ascaris lumbricoides or Roundworm infestation is an uncommon cause of biliary obstruction leading to complications such as acute pancreatitis and cholangitis. Recently the percentage of people living in Urban areas infested with roundworm has also increased significantly. Endoscopic removal of the worm is the treatment of choice, in addition to antihelminthic medication and supportive management.

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REFERENCES

1. Khuroo MS. Ascariasis. Gastroenterol Clin North Am. 1996;25:553-77.
2. Villamizar E. Ascaris lumbricoides infestation as a cause of intestinal obstruction in children: experience with 87 cases. J Ped Surg. 1996;31:201-4.
3. Misra SP, Dwivedi M. Clinical features and management of biliary ascariasis in a non-endemic area. Postgrad Med J. 2000;76:29-32.
4. Al-Qurashi A, Maklad KM, Al Abdulwahed O. Pancreatitis due to ascaris lumbricoides, a case report. J Egypt Soc Parasitol. 2003;33:657-62.
5. Madsen RB, Djurhuus H. Acute pancreatitis caused by Ascaris lumbricoides. Ugeskr Laeger. 2000;162:3730-1.
6. Sandouk F, Haffar S, Zada MM, Graham DY, Anand BS. Pancreatic-biliary ascarisis: experience of 300 cases. Am J Gastroenterol. 1997;92:2264-7.
7. Hoffmann H. In vivo and in vitro studies on the sonographical detection of ascaris lumbricoides. Pediatric Radiol. 1997;27:226-9.
8. Ferreyra NP, Cerri GG. Ascariasis of the alimentary tract, liver, pancreas and biliary system: its diagnosis by ultrasonography. Hepatogastroenterol. 1998;45:932-7.
9. Görgül A, Kayhan B, Ünal S. A case of biliary ascariasis treated medically. Gazi Med J. 1995;6: 187-9.
10. Shah OJ, Zargar SA, Robbani I. Biliary ascariasis: a review. World J Surg. 2006;30:1500-6.
11. Gonzalez AH, Regalado VC, Van den Ende J. Non-invasive management of Ascaris lumbricoides biliary tact migration: a prospective study in 69 patients from Ecuador. Trop Med Int Heal. 2001; 6:146-50.
12. Wani NA, Shah OJ, Naqash SH. Postoperative biliary ascariasis: presentation and management experience. World J Surg. 2000;24:1143-5.

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