

Acute pancreatitis due to round worm in main pancreatic duct

RD DANI, V GANDHI, G THAKKAR, P PATEL

Ind J Radiol Imag 2006 16:1:85-86

Key words : Pancreatitis, Ascariasis

Ascariasis is most common helminthic infection [3] with an estimated world-wide prevalence of 25% (>1.25 billion people). [1,2] Usually asymptomatic infections are most prevalent in tropical and developing countries where they are perpetuated by contamination of soil by human faeces as fertilizer. Symptomatic disease may be manifested by pneumonitis, intestinal obstruction, hepatobiliary and pancreatic injury and growth retardation.

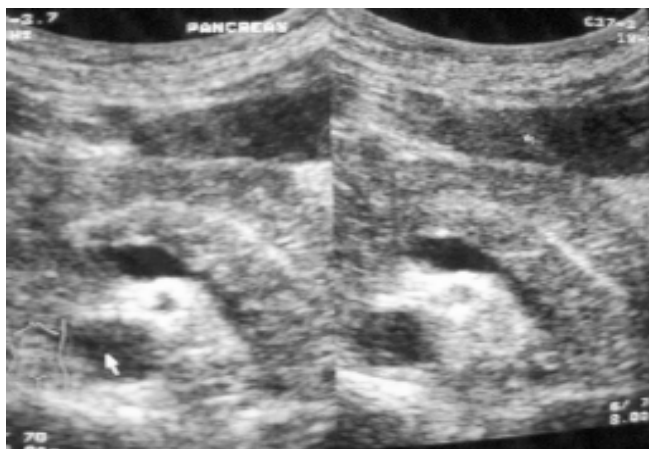


Fig 1 & 2: USG abdomen showing dilated pancreatic duct with echogenic lesion within it



Fig 3: USG abdomen showing a bulky pancreas

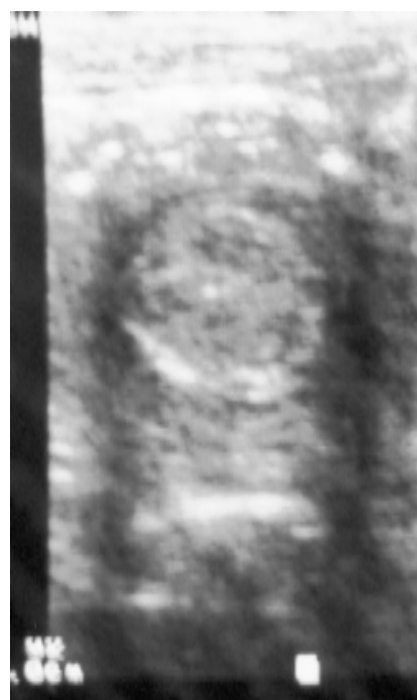


Fig 4 & 5: USG abdomen showing multiple mobile linear echogenic structures within the small bowel loops

From the Dept. of Radiology, NHL Municipal Medical College, Ahmedabad

Request for Reprints: Dr. Ranna Dani, 83Yogeshwar nagar, opp Anjali Theatre, Near Dharmindhar Society, Bhatta-Paldi - Ahmedabad - 380007

Received 7 May 2004; Accepted 10 December 2005

Case report : A twenty six year old female patient presented with abdominal pain (in epigastric region radiating to back) and vomiting (vomitus contained two-three round worms) on 30th Jan '04.

A radiograph of abdomen (standing) was taken which was normal.

USG abdomen was performed which showed two echogenic parallel lines in main pancreatic duct (Figure 1 and 2) and MPD measures 4 mm, pancreas was bulky (figure 1,2 and 3) measuring 28 mm in body and tail region. Small bowel loops (Figure 4 and 5), duodenum and stomach showed multiple moving linear structures within them, which on transverse scan appeared as target lesions. Common bile duct and Intrahepatic biliary radicles appeared normal.

Barium Meal follow up examination was performed showed multiple smooth longitudinal and coiled filling defects, suggestive of round worms.

Serum amylase of the patient was 1126 SU. Patient was treated with pyrantel palmoate and albendazol.

After treatment patient gave history of passage of multiple worms in stool and vomitus.

After three days follow up USG abdomen was done which showed normal main pancreatic duct with absence of previously mentioned linear echogenic structure (Figure 6), suggesting expulsion of worm from main pancreatic duct. Small bowel loops still showed few round worms within them.



Fig 6

Discussion: *Ascaris lumbricoides* is the commonest nematode infection of children have highest rate of prevalence and intensity and more likely than adult to be symptomatic. Children usually present with intestinal obstruction (2).

Adults are more likely to develop biliary complications due to migration of adult worm. In Damasens, of 300 adults referred for complications of ascariasis between 1988-1993, 98% had abdominal pain, 4.3% had acute pancreatitis, 1.3% had obstructive jaundice and 25% had worm emesis (1).

Abdominal pain, distension, colic, nausea, anorexia, intermittent diarrhea may be manifestations of partial or complete intestinal obstruction by adult worm.

Jaundice, nausea, vomiting, fever and severe or radiating, abdominal pain may suggest cholangitis, pancreatitis or appendicitis (3).

Cough, dyspnea, asthma and chest pain (during initial worm migration in lung) may also be seen

Abdominal distension is a non specific sign in children.

Abdominal tenderness in right hypochondriac region and epigastric region may suggest biliary complication.

There may be rales, wheeze and tachypnea during pulmonary migration.

Plain radiograph of abdomen may show air fluid levels suggestive of obstruction or whirlpool pattern of intraluminal worms. Biliary worms may calcify which may be seen on x-ray abdomen (2).

Chest radiograph may show fleeting opacities during pulmonary migration.

Barium Meal followup shows linear or coiled filling defects, sometimes with thin central track of barium out lining the worm's intestinal tract (2).

US Abdomen demonstrates echogenic moving linear structures within small bowel which on transverse scan appear as whirlpool pattern.

ERCP can be used as diagnostic and therapeutic tool. ERCP will show the worm as linear filling defect in biliary duct or MPD.

CT Abdomen will demonstrate dilated intrahepatic biliary radicles (at periphery), bulky pancreas (in cases of pancreatitis) and dilated bowel loops and filling defects after administration of (in cases of obstruction) oral contrast medium.

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