

## PICTURES IN DIGESTIVE PATHOLOGY

# *Ascaris lumbricoides* as etiologic factor for pancreas inflammatory tumor

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### CASE REPORT

A 58 years old male consulted to his practitioner due to long evolution and continuous abdominal pain with non constant diarrhea. His medical history includes chronic ischemic cardiopathy, atrial flutter, hypertension, bilateral hip prosthesis. A colonoscopy was performed finding no abnormalities. The scanner showed an infiltrative mesenteric mass of 7 x 14 cm with undefined margins which contacted with pancreatic cephalic portion and uncinate process (Fig. 1). A MRI dismissed local and linfovacular infiltration. The study was completed with a FNA cytology guided by EUS being positive for neoplastic cells, suggesting pancreatic adenocarcinoma moderately differentiated. After this diagnosis cephalic pancreaticoduodenectomy was performed.

Postoperative evolution was good with a pancreatic leak solved with medical measures. Further anatomical pathology analysis demonstrated pancreatic ascariasis with fibrocaceous nodules and abscess affecting cephalic pancreas and transverse mesocolon (Fig. 2). There were no tumor cells founded in the surgical specimen. The patient was treated with albendazole 400 mg.

### DISCUSSION

Ascariasis is frequent helminthic infection which is suffered by a quarter of the human population. Its condition is endemic in developing countries, Asia and Latin America. In developed countries it is unusual (1). The biliopancreatic affection is unlikely, being in our environment extremely rare, but it can be responsible for potentially serious complications (2).

Their eggs (Fig. 3) are swallowed, the larvae emerge, they invade intestinal mucosa and get through the portal and systemic circulation to lungs where they mature and move to pharynx getting the digestive tract again. They colonize the small intestine and they remain causing no symptoms in most of cases (1,2).

Inbetween abdominal manifestations we focus on biliopancreatic sphere. Toxins excreted by the nematodes (neurotoxins, anafilotoxins, hemolysins,...) produce a spasm at Oddi's sphincter (3), and plus detritus from the intestinal tract, bile and pancreas canalicules may get occluded and infect organic fluids (2). The most common form is the biliary colic. Less frequent but more transcendental are other conditions such as acute cholecystic, cholangitis, liver abscess, obstructive jaundice, choledocolithiasis and acute and chronic pancreatitis (4,5).

The elective method of diagnosis is microscopic identification of the eggs in the feces, the fresh exam is able to detect moderate to high infections. The US may be diagnostic in case worms are directly seen.

The treatment for biliary ascariasis is bases in digestive repose, analgesia, extended spectrum antibiotherapy (if there



Fig. 1. Inflammatory process over pancreas cephalic portion.

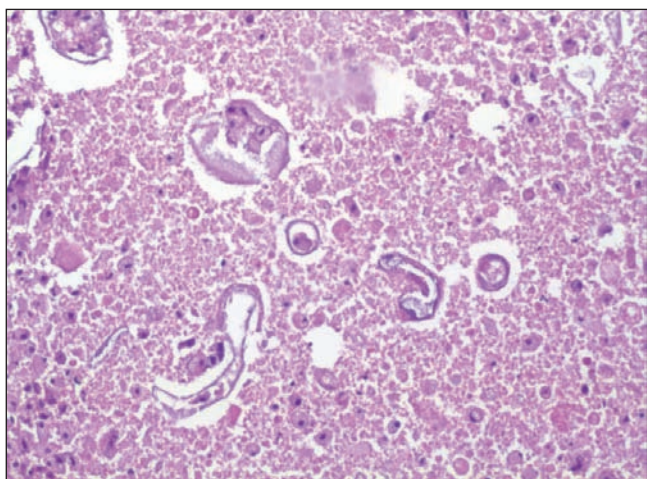


Fig. 2. In a low augment (4x), we observe all over the image oval structures with a plain double layer and some of them with lumpy material inside. This image corresponds to transversal and longitudinal cuts of *Ascaris lumbricoides*.

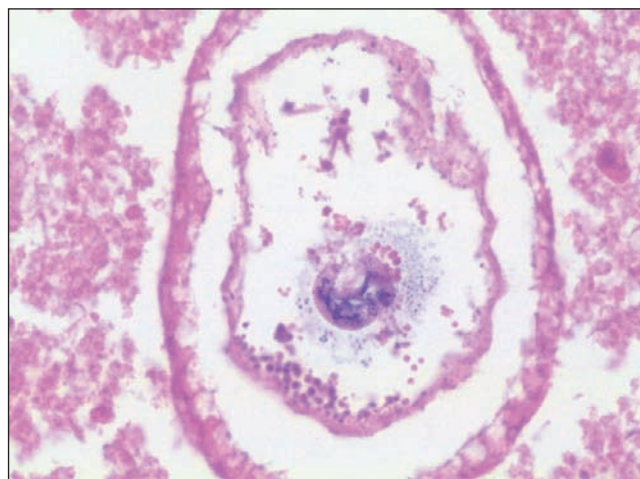


Fig. 3. In a high augment (40x), we can appreciate the double layer, irregular with mamelons, less visible externally, with granular remaining in the inside (*Ascaris* embryonated structures). Infertile or embryonated egg.

is intra-abdominal infection) and to eradicate the worms using albendazole, pyrantel pamoate, mebendazole or levamisole (1). The extraction of worms using ERCP is a valid option in bile and pancreas obstructions (6).

Although it is exceptional in our environment, *Ascaris lumbricoides* should be part of differential diagnosis of cephalic pancreas inflammatory tumors.

## REFERENCES

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