Primary pancreatic actinomycosis: A case report and literature review

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Actinomycosis is a rare disease caused by *Actinomyces israelii*, a commensal of the gastrointestinal and female genital tract that can acquire pathogenicity after penetration of tissues favored by breaks in mucous membranes. Pancreatic involvement is extremely rare.[¹]

These lesions can mimic malignancy and be overtreated with unnecessary surgery and risks.

According to our knowledge, there are only 12 cases reported in the literature [Table 1]. A history of previous pancreatic surgery or stenting is frequently reported.[²] Unfortunately, the diagnosis is often made after the surgery when medical therapy is the only treatment required.

Our case involves a 63-year-old man with a 6-month history of abdominal pain, nausea, anorexia, and weight loss. Ten years before, he developed acute necrotizing pancreatitis which required necrosectomy. Blood test findings revealed elevated white blood cell count, polymerase chain reaction, and cholestatic indices.

CT detected a hypoattenuating solid large mass, in the pancreatic head region, measuring 87 mm × 77 mm, with encasement of the portal and superior mesenteric veins, upstream dilatation of the pancreatic duct, and duodenal compression [Figure 1a]. These findings suggested locally advanced neoplasia.

The patient was referred to our endoscopic unit to perform an EUS with fine-needle biopsy (EUS-FNB).

Endosonography showed a normal “salt and pepper” pattern in the pancreatic body and tail but a dilated main pancreatic duct (MPD). From the bulb, it was possible to highlight the lesion [Figure 2a] and EUS-FNB was performed with a 20G ProCore fine needle. Histopathological analysis showed granulomatous inflammation with *Actinomyces* colonies [Figure 2b].

The patient quickly recovered with complete relieve of the symptoms and CT neoplasm disappearance after 1 month of intravenous ampicillin therapy [Figure 1b]. Currently, he is in follow-up, well, and symptoms-free.

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Pancreatic actinomycosis can mimic neoplasms. This should be taken into account, especially in patients with previous pancreatic surgery or stenting that might create a break of the intestinal wall, which would allow bacteria penetration.

Antibiotic is the treatment of choice, and surgery is reserved to selected cases to drain otherwise unhealing abscesses.\textsuperscript{[3]}

EUS-FNB is a useful tool that can help to reach a prompt diagnosis and therapy, avoiding unnecessary and risky surgery.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that his name and initials will not be published and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

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**Conflicts of interest**

There are no conflicts of interest.

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