Cleveland Clinic

# Idiopathic Non-Caseating Pancreatic Granuloma Mimicking Neuroendocrine Tumor: A Challenging Diagnostic Dilemma

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## Abstract

**Aim:** We present an interesting case of a patient who presented with a concern for a neuroendocrine tumor before diagnosing idiopathic non-caseating pancreatic granuloma.

**Case Presentation:** A 75-year-old female presented with left upper quadrant pain, chronic diarrhea, and palpitations. Endoscopic ultrasound showed a hypoechoic mass measuring 11 x 27 mm in the tail of the pancreas along with multiple enlarged peripancreatic lymph nodes. Fine needle biopsy showed multiple non-caseating granulomas with benign pancreatic and lymphoid tissue. There was no evidence of malignancy, and stains for acid-fast bacilli, FITE stain, and fungal infections were all negative. A benign idiopathic etiology was concluded.

**Conclusion:** Idiopathic etiology in non-caseating pancreatic granuloma is rare. Careful evaluation and prompt diagnosis are essential for proper management and excluding malignancy.

## Introduction

- The incidence of pancreatic granuloma is **rare**. Contrary to caseating granuloma, **non-caseating** is secondary to **systemic diseases**. When they are found on imaging, they can be indistinguishable from cancer, leading to **extensive** and **invasive** workup.
- We present the case of a patient who underwent extensive evaluation before reaching the final diagnosis of **idiopathic pancreatic granuloma**.

## Case Presentation

- A 75-year-old female presented with left upper quadrant (LUQ) pain and chronic diarrhea. Physical exam was unremarkable. Serum chromogranin was **3,123** ng/ml and urine metanephrines level was within normal range.
- Magnetic resonance cholangiopancreatography (MRCP) showed a stable **2.5 cm cystic lesion** in the tail of the pancreas communicating with the main pancreatic duct (MPD) consistent with branch-duct intrapapillary mucinous neoplasm (BD-IPMN) (**Image 1**).
- Endoscopic ultrasound (**EUS**) was performed for further evaluation, which showed a homogenous and well-defined **hypoechoic mass** measuring **11 x 27** mm in the tail of the pancreas (**Image 2**) along with multiple enlarged **peripancreatic lymph nodes** (**Image 3**).
- Fine needle biopsy (**FNB**) was obtained using a 22-gauge needle of the pancreatic lesion and peripancreatic lymph nodes. Multiple **non-caseating granulomas** and benign pancreatic and lymphoid tissue were found on histopathology (**Images 4**). There was no evidence of malignancy, and stains for acid-fast bacilli, FITE stain, and fungal infections were all **negative**.
- At 6-months follow-up, symptoms **resolved**. A **benign idiopathic** etiology of the non-caseating pancreatic granuloma was concluded. The patient was doing clinically well with **conservative** management.

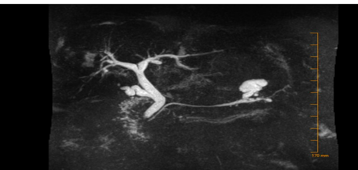

**Image 1.** Magnetic resonance cholangiopancreatography (MRCP) showing a 2.5 cm cystic lesion in the tail of the pancreas communicating with the main pancreatic duct, consistent with a branch-ductal intrapapillary mucinous neoplasm (BD-IPMN)

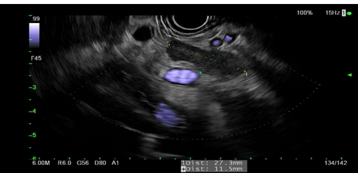


**Image 2.** Endoscopic ultrasound (EUS) showing a homogenous well-defined hypoechoic lesion in the tail of the pancreas measuring 11 x 27 mm

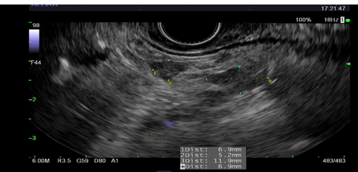


**Image 3.** Endoscopic ultrasound (EUS) showing two hypoechoic and irregular-shaped enlarged peri-pancreatic lymph nodes

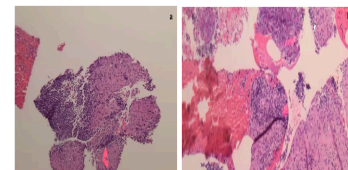


**Image 4.**
**a-** Hematoxylin & eosin stain (40X) showing non-caseating epithelioid granuloma represented by tightly packed epithelioid cells, Langhans giant cells and lymphocytes, with the adjacent normal lymphoid tissue;
**b-** Hematoxylin & eosin stain (40X) showing hyalinized non-caseating granulomas with benign pancreatic tissue

## Discussion

- Non-caseating pancreatic granuloma is **uncommon**. Multiple etiologies include mycobacterial infection, sarcoidosis, Crohn's disease, fungal infection, and autoimmune disease, including rheumatoid arthritis or vasculitis (e.g., granulomatosis with polyangiitis), or foreign body (e.g., Talc). **Malignancy** has to be **ruled out** whenever there is evidence of a pancreatic mass.
- In general, most cases of pancreatic granuloma can have a relatively **similar** presentation. Consequently, **extensive workup** can be done.

## Conclusion

- Careful evaluation is essential for proper management as it is necessary to **rule out** other etiologies before confirming the diagnosis of idiopathic pancreatic non-caseating granuloma.

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