



Vasoactive Intestinal Tumors (VIPoma) Missed on CT but EUS to the Rescue

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INTRODUCTION

- Pancreatic neuroendocrine tumors (pNETs) are rare with >85% being non-functional.
- Among the functioning pNETs, vasoactive intestinal peptide tumors (VIPomas) account for <2% of pNETs.
- Here we present a case of a diagnosed VIPoma patient with negative initial computed tomography (CT) scan but confirmatory presence on endoscopic ultrasound (EUS).

CASE DESCRIPTION

- A 74-year-old female with recurrent urgent care visits for chronic diarrhea and dehydration was referred from outside hospital for EUS.
- She was found to have a serum VIP level >900 with hypokalemia and hypercalcemia.
- Initial CT Abdomen/Pelvis performed at outside hospital was negative for any pancreatic lesions
- EUS performed at our hospital demonstrated a 19.9 mm x 14.0 mm hypoechoic mass in the uncinata process of the pancreas.

IMAGING

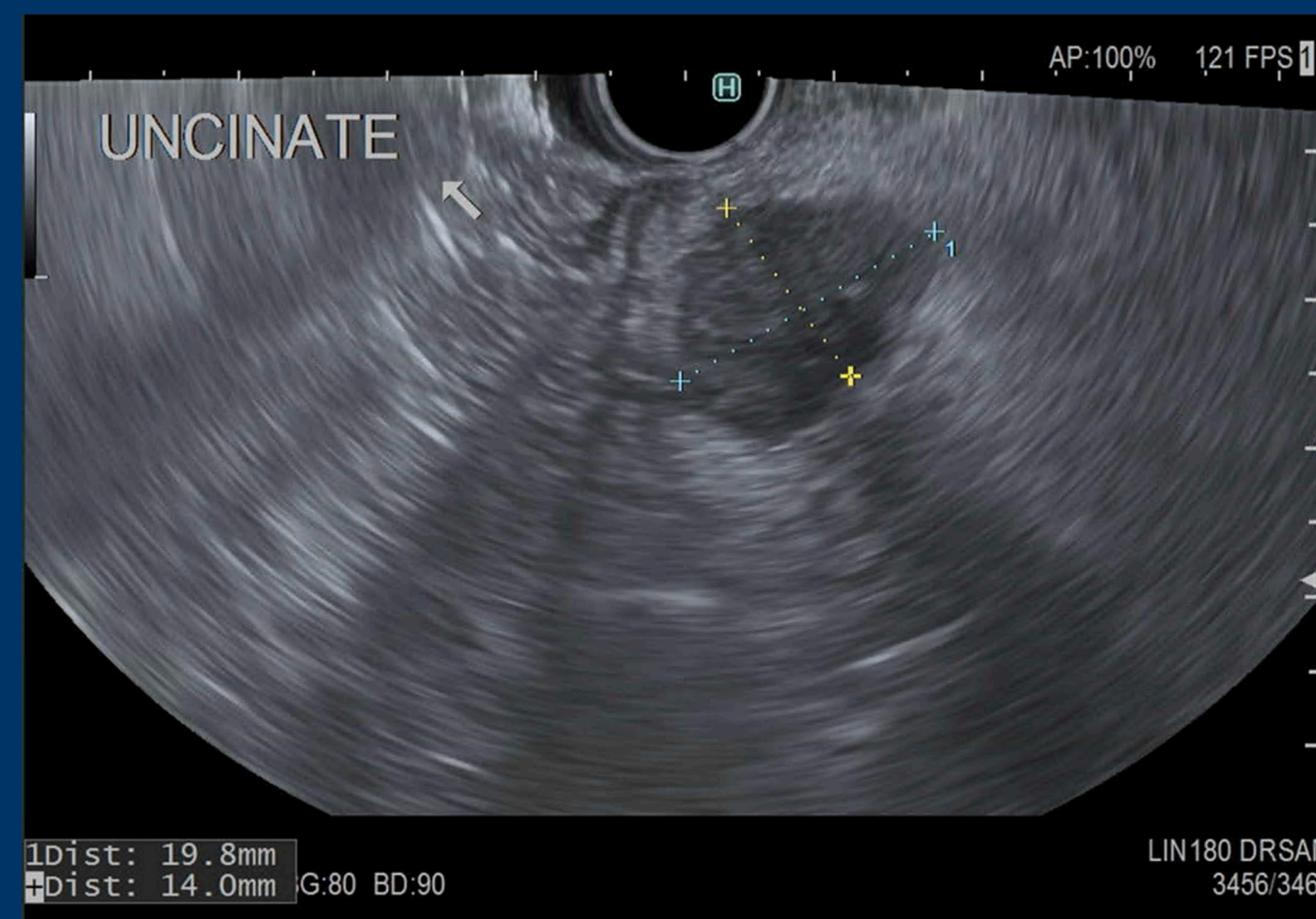


Figure 1: Endoscopic ultrasound demonstrating hypoechoic pancreatic mass in uncinata process.

FINAL RESULTS

- Fine needle biopsy (FNB) was performed which revealed a well-differentiated neuroendocrine tumor, WHO Grade 1.
- Following diagnosis, the patient was started on octreotide for symptomatic improvement.
- Follow up imaging with MRI of the abdomen revealed a hepatic lesion concerning for metastasis.
- Repeat EUS with fine needle aspiration (FNA) was performed with final pathology consistent with metastasis.

DISCUSSION

- CT scan is often used as the first-line imaging modality to detect neuroendocrine tumors, but studies have suggested differing levels of sensitivity.
- Localizing a VIPoma or other neuroendocrine tumor with a single imaging modality such as CT scan can be challenging and a multi-modality imaging approach including MRI or EUS may be necessary.
- EUS has a demonstrated VIPoma detection rate of 90% and was able to detect lesions in 33% of cases with negative initial CT.
- This case and literature review demonstrate that in the setting of clinical suspicion for VIPoma with or without VIP elevation, a negative initial CT does not necessarily rule out VIPoma and further imaging modalities should be considered.

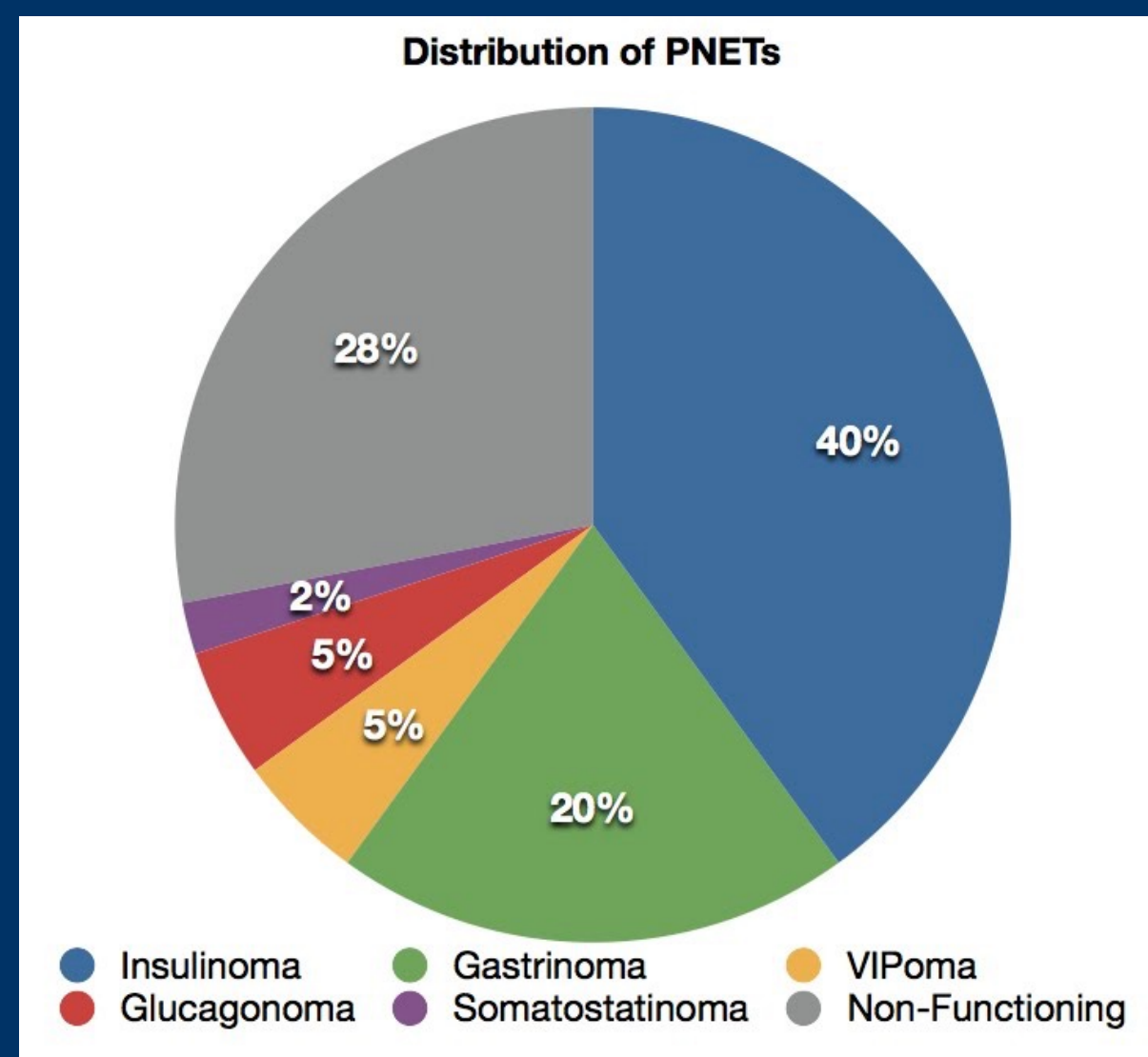


Figure 2: Distribution of pancreatic neuroendocrine tumors (pNETS). <http://ozradonc.wikidot.com/pathology:pancreas-endocrine>