

# A Case of Refractory Diarrhea due to Zollinger-Ellison Syndrome

## Introduction

- Zollinger Ellison Syndrome (ZES) is a neuroendocrine tumor associated with refractory acid reflux and diarrhea
- ZES can mimic more commonly associated diseases including GERD

## Case Description

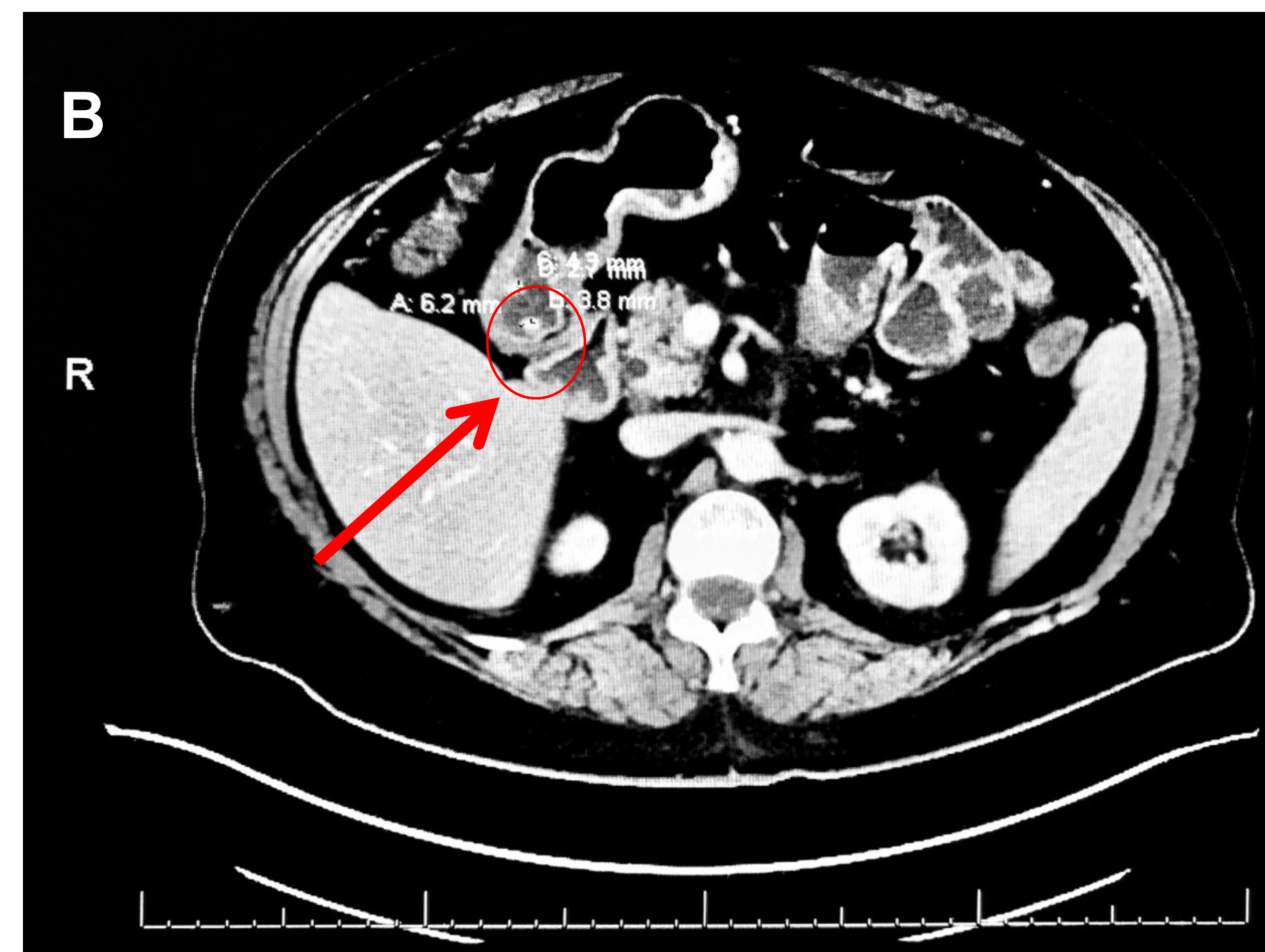
### 64yo female with history of diabetes presents with acute on chronic diarrhea

- Two-year history of non-bloody diarrhea
- Worsening to 6-7 bowel movements per day over the last two months prior to presentation
- Associated nausea, acid reflux, and abdominal pain
- Family History: mother requiring small bowel resection
- Previous workup: colonoscopy and an esophagoduodenoscopy (EGD) showing duodenal ulcerations with biopsies negative for celiac disease
- Medication including a proton-pump inhibitor (PPI), colestipol, and loperamide were without improvement
- Stable vitals, physical exam notable for diffuse abdominal tenderness

### Workup:

- Labs: Hemoglobin of 10.2 gm/dL (grams per deciliter)
- Imaging: CT Abdomen: Multiple, small duodenal ulcers with a polyp at gastric antrum
- EGD: esophagitis, duodenal/gastric mucosal atrophy, duodenal biopsy showing foveolar metaplasia
- Fasting gastrin level: 211 pg/mL (pictogram per milliliter) and a secretin stimulation test showed serum gastrin blood levels of 121, 258, and 483 pg/mL at 2, 5, and 10 minutes
- Dotatate scan: metastatic somatostatin receptor expressing portocaval adenopathy without tracer avid primary neuroendocrine tumor.
- Treatment: lanreotide and referred to oncology

## Zollinger-Ellison Syndrome (ZES)



**Figure 1A, 1B:** Computed Tomography (CT) abdomen showed multiple, small duodenal ulcers and 4 millimeter (mm) enhancing polyp at the gastric antrum (red arrows)

## Discussion

- Zollinger Ellison syndrome (ZES) is a gastrin-secreting neuroendocrine tumor that can be associated with multiple endocrine-neoplasia Type 1 (MEN-1)
- Non-specific gastrointestinal symptoms in the presence of ulcerations can delay diagnosis and mimic more commonly associated gastrointestinal reflux disease (GERD)
- Proton-pump inhibitors (PPI) can be vital to treatment, but can postpone diagnosis masking symptoms and falsely lowering gastrin levels
- Secretin stimulation and gastric pH can be used for diagnosis
- Dotatate CT can be used to evaluate tumor localization

### Key Points:

- ZES should be included in the differential diagnosis in patients presenting with refractory chronic diarrhea, acid reflux, and a positive family history

## References

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