A UNIQUE PRESENTATION OF GASTRINOMA COMPLICATED BY DUODENAL PERFORATION

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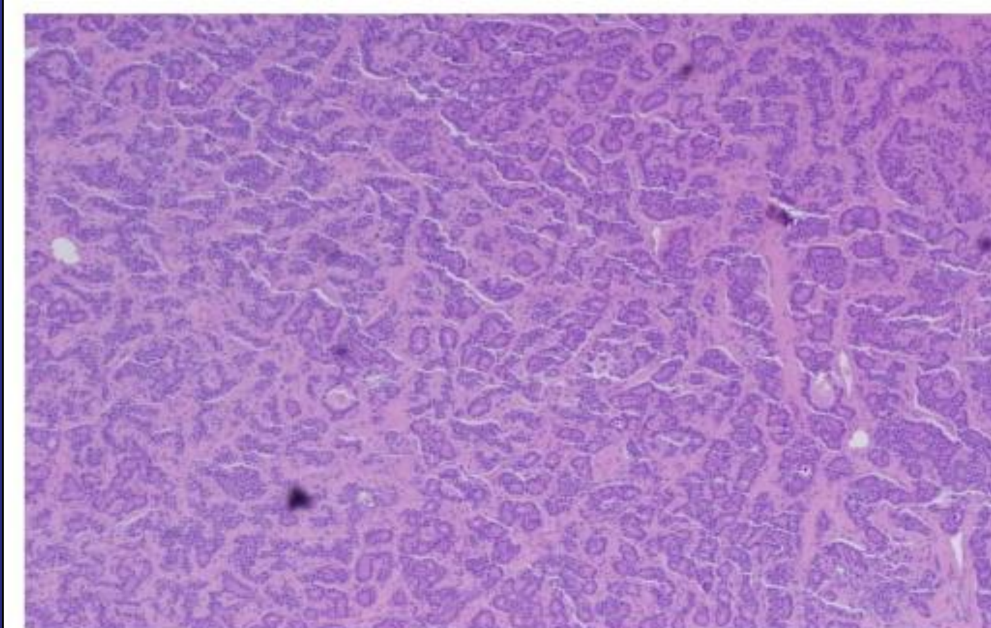
Introduction

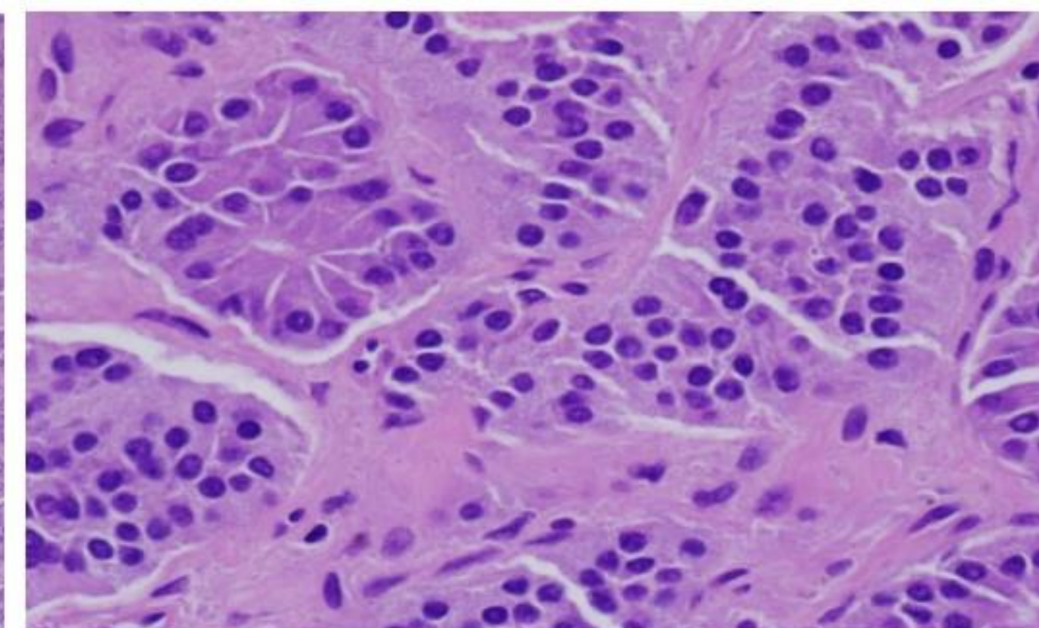
- Neuroendocrine tumors are uncommon neoplasms with multiple different characteristics. They can be benign but also proliferate into malignant tumors with different pathological scenarios such as intestinal obstruction/ intraluminal mass. Gastrinomas are type of NET originating from pancreatic islet cells but can also arise from gastrin-producing cells in the duodenum.
- We present a case of gastrinoma, in which clinical period was complicated by small bowel perforation.

Case Description

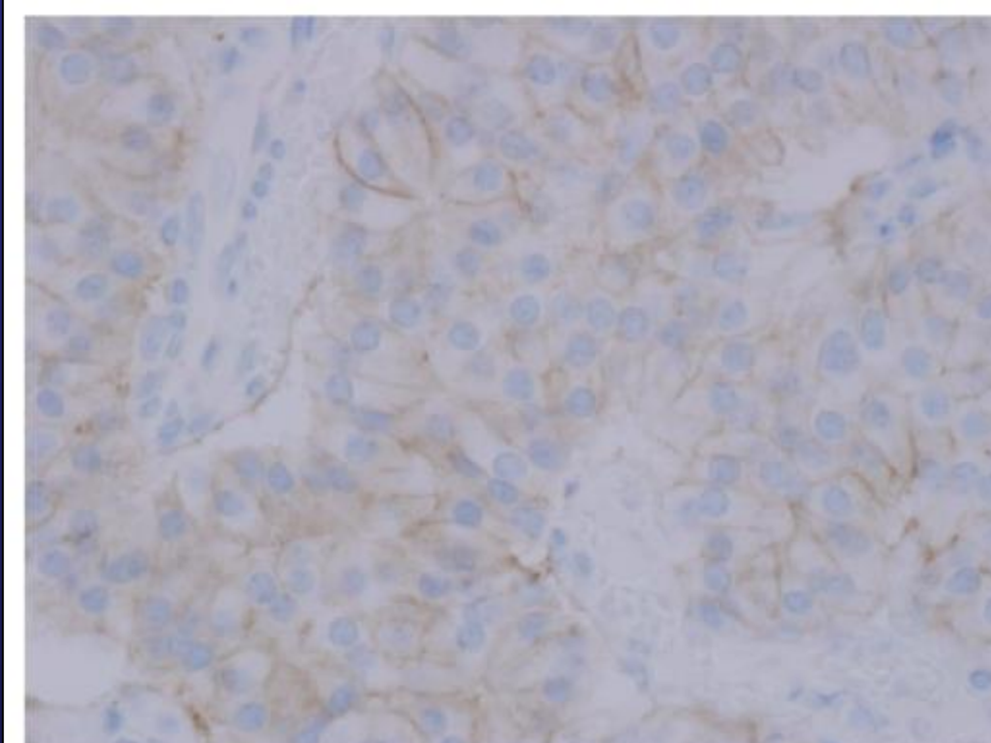
- A 55-year-old lady with no significant past medical presented with complaints of abdominal pain, diarrhea and nausea/vomiting that was uncontrolled with symptomatic management.
- The patient underwent an EGD that showed esophagitis, gastritis, and duodenitis, and she was transferred to our facility for further work-up.
- She underwent a workup for Zollinger Ellison Syndrome in view of persistent symptoms. Her gastrin level came back elevated at 4,180 pg/ml after her medications were stopped to get the correct lab readings.
- A nuclear scan was scheduled for the patient to localize the gastrinoma lesion, but suddenly the patient became altered, hypotensive, and developed an acute abdomen.



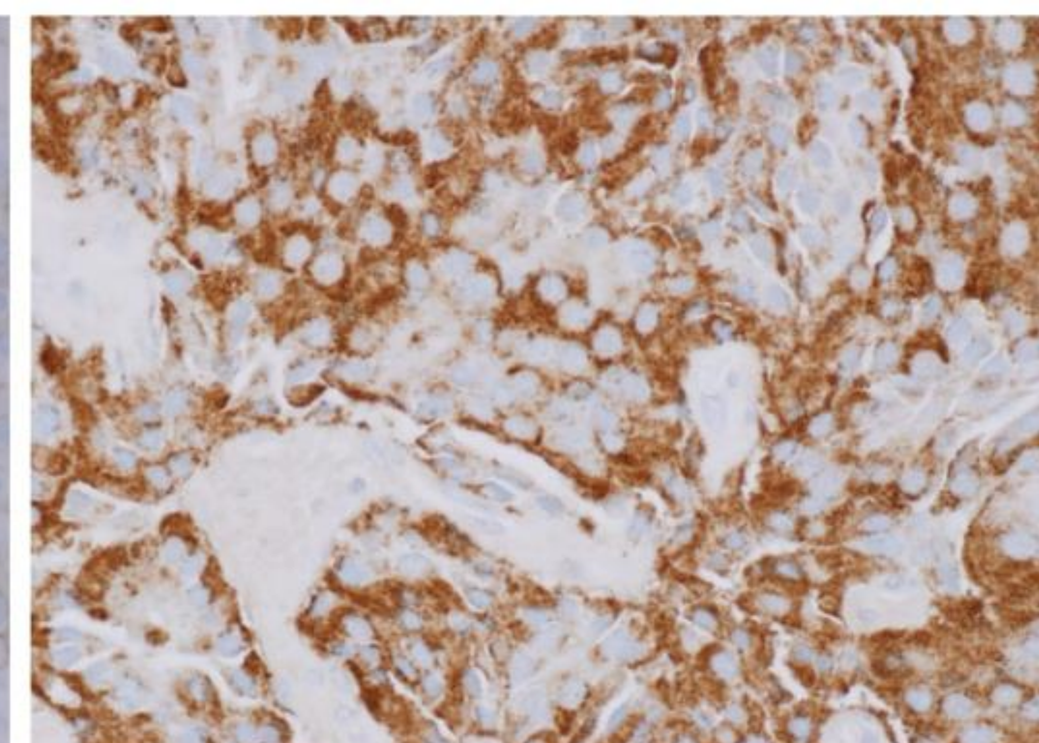
HE section (x 40) reveals the lymph node is occupied by tumor cells.



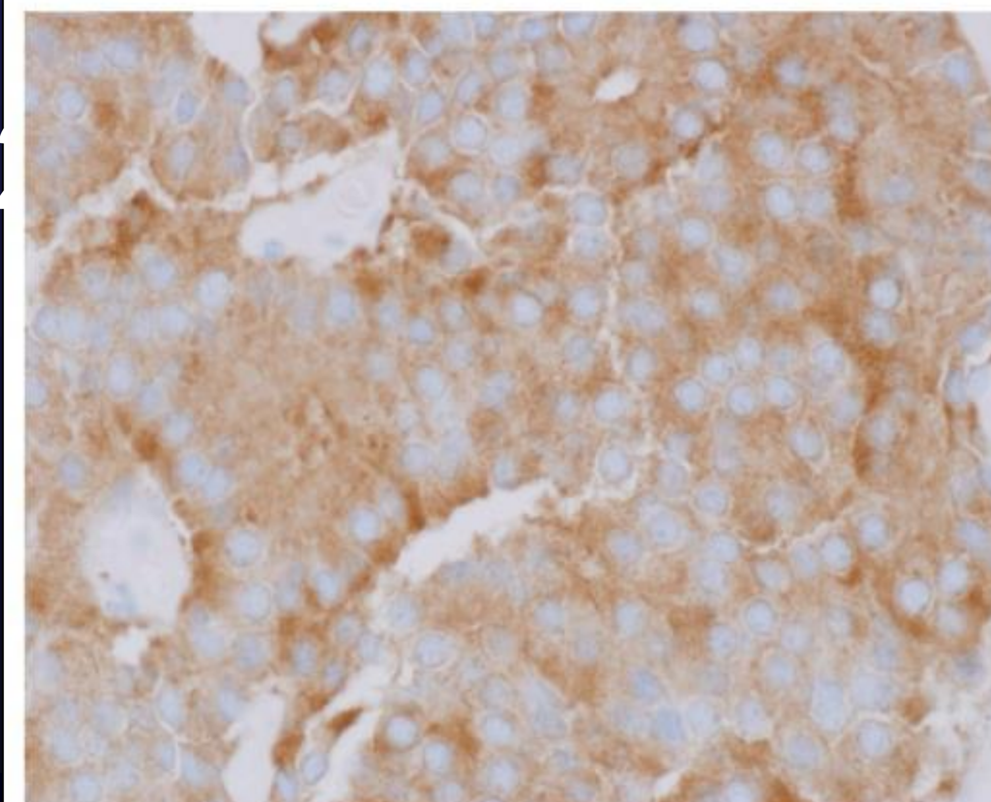
HE sections (x 400) reveals monotonous tumor cells with round/oval nuclei with salt and pepper chromatin and moderate eosinophilic granular cytoplasm



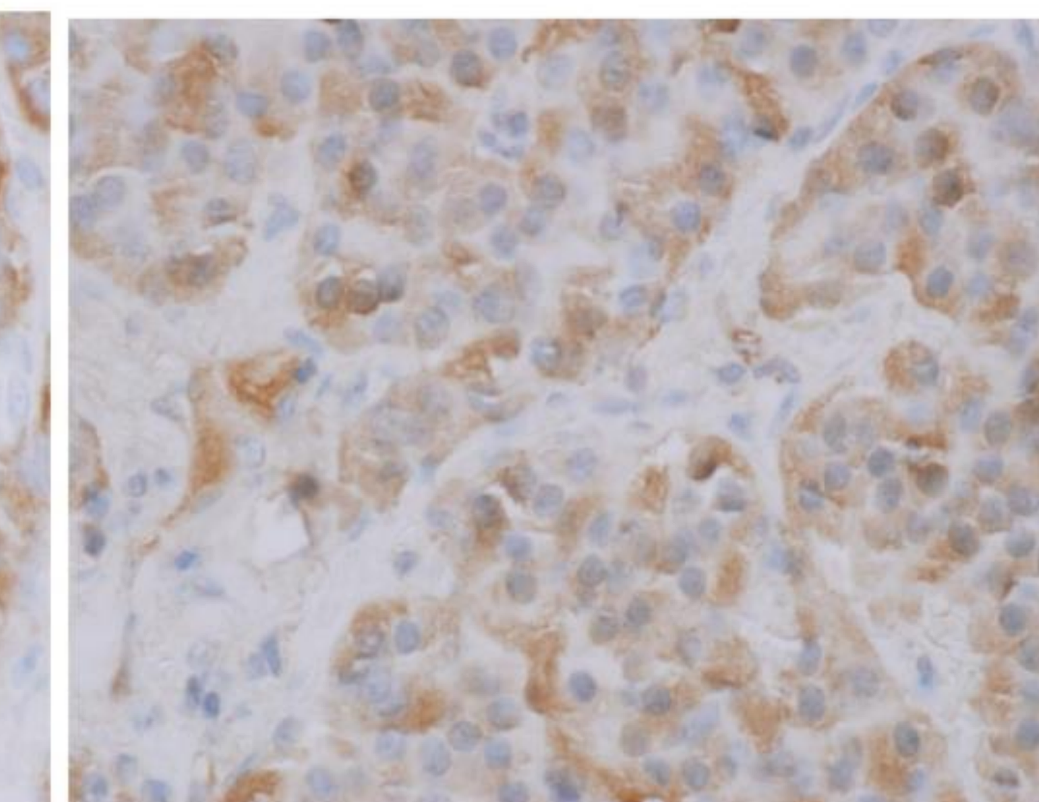
IHC stain (x 400) shows weakly positivity for CD56 on tumor cells



IHC stain (x 400) shows diffuse and strong positivity for chromogranin on tumor cells.



IHC stain shows diffuse and strong positivity for synaptophysin on tumor cells.



IHC stain shows diffuse positivity for gastrin on tumor cells.

- On further investigation with CT scan of the abdomen, patient was found to have pneumoperitoneum, secondary to bowel perforation. She underwent an emergent exploratory laparotomy, was found to have large perforations of the 3rd, 4th portion of the duodenum and several small perforations throughout the small bowel. A Para duodenal lymph node was taken and sent for pathology.
- Pathology revealed a well-differentiated NE tumor: histological subtype gastrinoma. The patient underwent duodenal resection, gastrojejunostomy, cholecystectomy and feeding tube placement.
- Post-op period was complicated by patient having persistent dysphagia, initially to solids and progressed to have dysphagia to liquids as well.
- The patient underwent an EGD again which showed presence of esophageal stricture and had to undergo dilatation 6 times in a span of 2 months for symptom relief.
- She follows up with oncology and GI regularly and is scheduled to get a PET scan soon to rule out metastasis.

Discussion

Gastrinomas manifest with peptic ulcer disease symptoms but some patients present with diarrhea. Serum gastrin levels of > 1000 pg/ml with symptoms is diagnostic of gastrinoma. A secretin provocative test is used for diagnosis if gastrin levels are < 1000 pg/ml.