

Endocrine Tumors of the Gastrointestinal System

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The gastroenteropancreatic endocrine system (GES)

Tumors of the GES

- Incidence

- Diagnosis

Multiple Endocrine Neoplasia Type 1 (MEN 1)

- Manifestations

- Characteristics

- Components

- Screening

 - serum tests

 - genetic testing

 - imaging

Insulinoma

- Diagnosis

- Localization

- Treatment

- Provocative testing

Gastrinoma

- Characteristics

- Gastrinoma triangle

- Genetic alterations

- Zollinger Ellison Syndrome

- Secretin stimulation test

- Pharmacotherapy

Watery Diarrhea Syndrome

VIPoma

Manifestations

Clinical course and treatment

Glucagonoma

Occurrence

Alternative processing of glucagon

Clinical syndrome and therapy

Somatostatinoma

Rare tumors of the GES

Carcinoid

Syndrome

Tumors

Serotonin metabolism

Diagnosis

Treatment

Interferon therapy

IRF-1

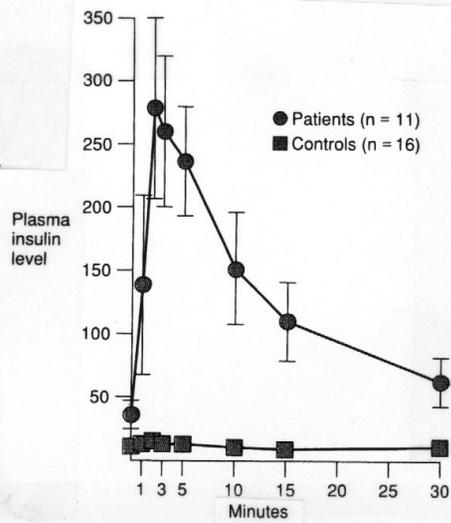
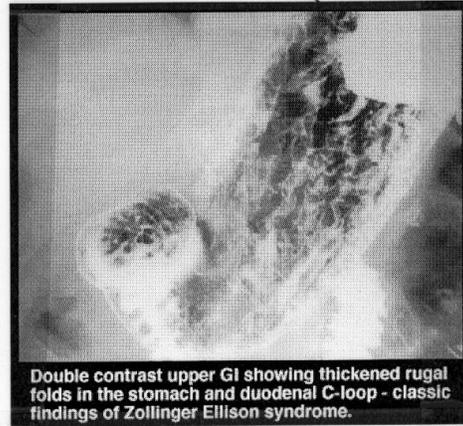


Figure 1. Provocative testing for insulinoma

Fig. Zollinger-Ellison



Double contrast upper GI showing thickened rugal folds in the stomach and duodenal C-loop - classic findings of Zollinger Ellison syndrome.

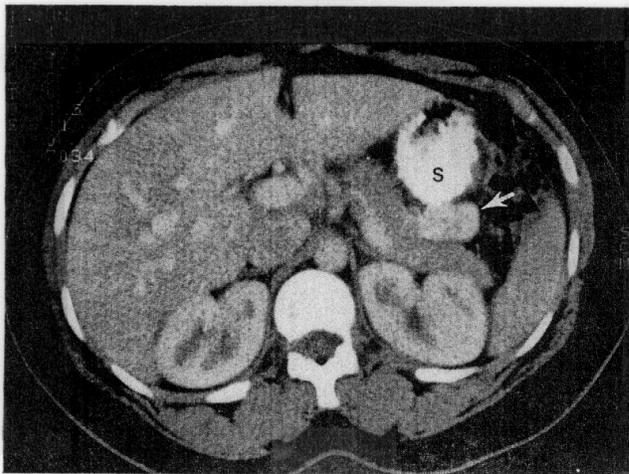


Figure 2. CT scan of insulinoma.

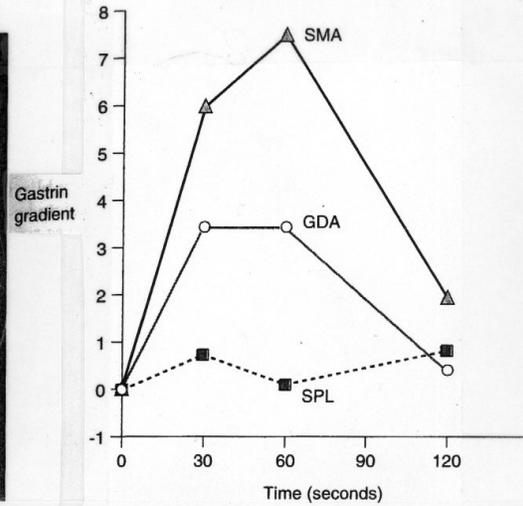


Figure 5. Graphic depiction of the results of a selective arterial secretin stimulation test in a patient with gastrinoma.

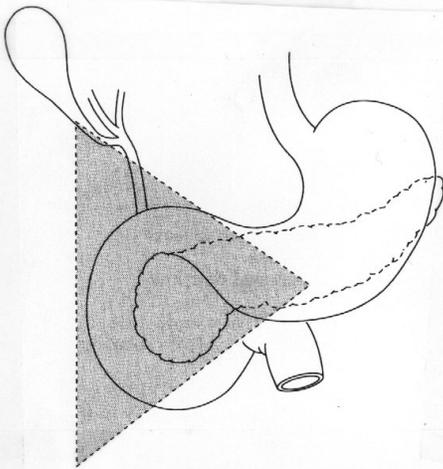


Figure 3. Most gastrinomas are found within the gastrinoma triangle.

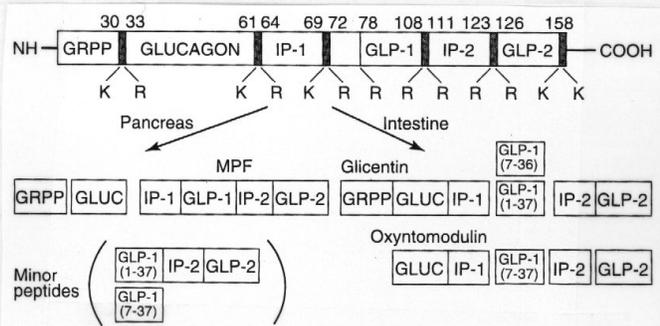


Figure 6. Alternative post-translational processing of proglucagon in the pancreas and intestines.

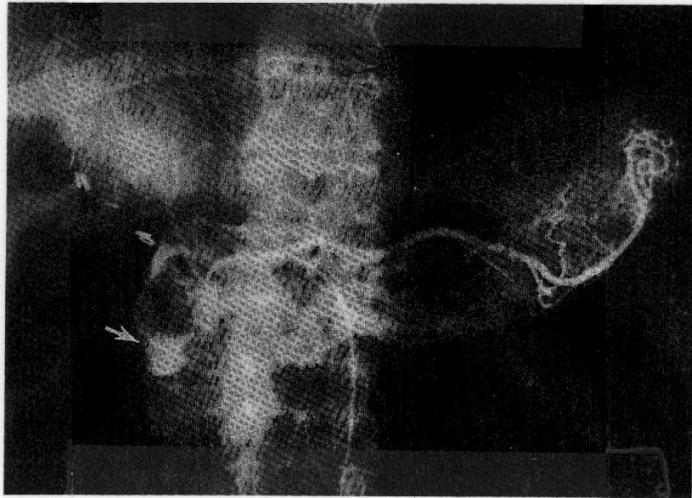


Figure 7 . Selective celiac angiogram in a patient with gastrinoma.

Fig 8. RARE FUNCTIONAL PANCREATIC ENDOCRINE NEOPLASMS

Tumor	Hormone/Candidate	Features
Calcitoninoma	Calcitonin	Secretory diarrhea
Parathyrioma	PTH-related protein	Hypercalcemia Bone pain Normal serum PTH
GRFoma	Growth hormone releasing factor	Acromegaly
ACTHoma	Adrenocorticotrophic hormone	Cushing syndrome
Neurotensinoma	Neurotensin	Tachycardia Hypotension Malabsorption

PTH, parathyroid hormone.

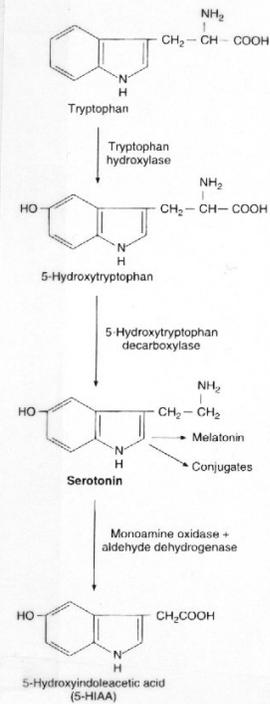
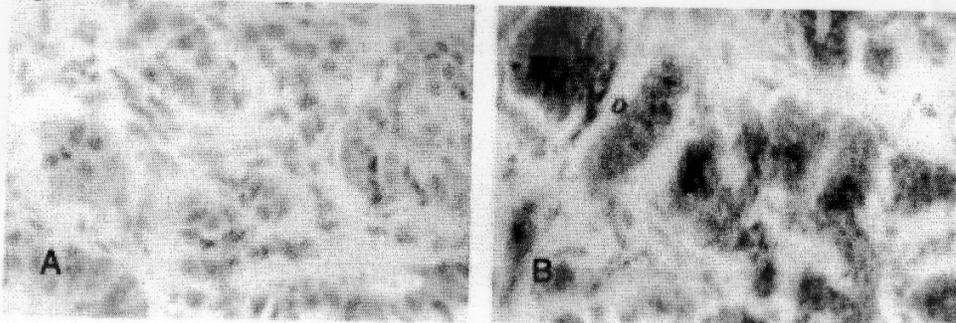


Figure 9 . Biosynthesis and catabolism of serotonin

Figure 10



References

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