Malignant insulinoma: about 3 cases

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Introduction

Insulinomas are rare and are malignant in 5-10% of cases [1]. The diagnosis of malignancy is difficult to establish, apart from a tumor dissemination. Secondary locations are mainly liver and lymph nodes, more rarely bone, lung and brain [2].

The prognosis is poor with a survival of less than 10% at 2 years [3]. We report in this regard three malignant insulinomas observations.

Objective

Report three cases of malignant insulinomas.

Cases reports

Case N° 1

Patient aged of eighteen years without pathological antecedents, admitted for further exploration of hypoglycaemia revealed by neuroglucopenic signs.

Hormonal assessment: for an endogenous hyperinsulinism.

Setting	Results	Standards
Glucose	**0.28**	0.7 - 1.10 g/l
Insulin	**192.53**	2.7 – 10.3 µUI/ml
C-peptide	**5.80**	0.78 - 5.19 ng/ml

Localisation:

→ Endoscopic ultrasound:

View two small pancreatic tumors with metastatic peri-pancreatic lymphadenopathy certifying malignancy .

→ Abdominal CT: no abnormalities.

→ Abdominal MRI: no abnormalities.

Treatment :

Patient refused surgery, so he received medical treatment:

- General measures
- Diazoxide

Case N° 2

A nineteen years old boy without personal or family antecedent was hospitalized for hypoglycemia revealed by neuroglucopenic signs.

Hormonal assessment: found an endogenous hyperinsulinism.

Setting	Results	Standards
Glucose	**0.36**	0.7 - 1.10 g/l
Insulin	**74.64**	2.7 – 10.3 µUI/ml
C-peptide	**> 7ng/ml**	0.78 - 5.19 ng/ml

Localisation:

Pancreatic primary tumor was not visualized but the presence of multiple liver metastases attested malignancy

→ Endoscopic ultrasound: not done

→ Abdominal CT: multiple hepatic locations suggestive of secondary locations.

→ Adbominal MRI: not done

Treatment :

Inoperable patient, he received symptomatic treatment:

- General measures
- Steroids
- Continuous glucose infusion

Case N° 3

A man of thirty-four was hospitalized for exploration of hypoglycemia signs revealed by neuroglucopenic. The examination did not note any family event.

Hormonal assessment: confirmed endogenous hyperinsulinism

Setting	Results	Standards
Glucose	0.40	0.7 - 1.10 g/l
Insulin	14.8	2.7 – 10.3 µUI/ml
C-peptide	3.42	0.78 - 5.19 ng/ml

Localisation:

Pancreatic tumor was objectified in the head of the pancreas at the endoscopic ultrasound, CT and MRI abdominal with lymphadenopathy.

→ Endoscopic ultrasound fig 1:

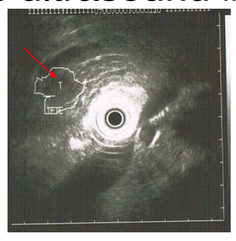


Fig 1: Hypoechoeic lesion of **17mm**

→ Abdominal CT fig 2:

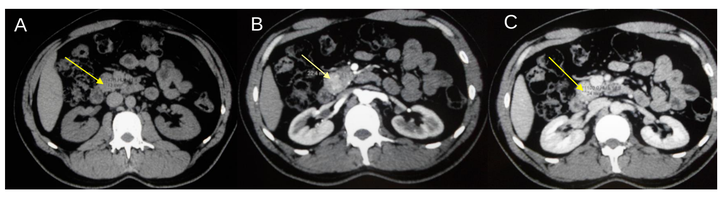


Fig 2: Hypodense pancreatic lesion of **22.4mm** (A), Enhanced after contraste iodine injection (Early: B, and lately: C)

→ Adbominal MRI fig 3:

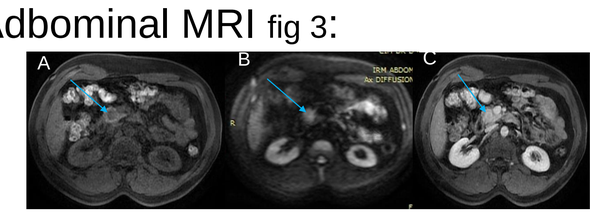
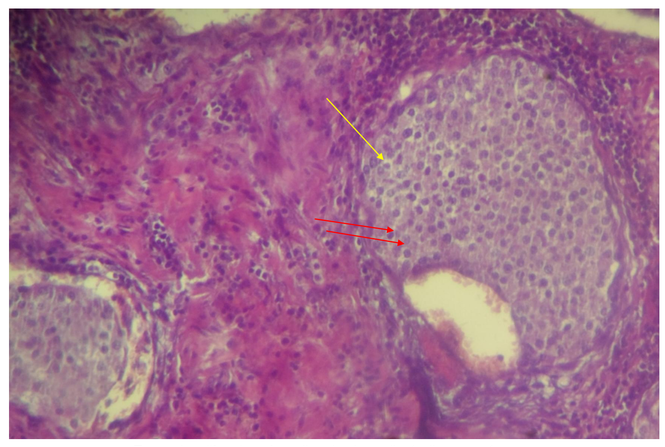


Fig 3: T1 Hypodense pancreatic lesion of **22mm** (A), hyperdense lesion (B), enhancement after gadoliniuminjection (C).

Treatment:

The patient was operated on with complete surgical resection.

Histology: suspicion of malignant insulinoma



Tumoral proliferation of small endocrine cells (yellow arrow).
Chromatin rich cells with enhanced mitosis(red arrow).

Fig 4: histological aspect: suspicion of malignant insulinoma

The evolution was marked by the regression of hypoglycemia.

Discussion and conclusion

Malignant insulinoma is often unique and sporadic [1]. Diagnosis of malignancy is difficult to make on histological clues and rely mainly on the presence of secondary locations. The treatment of malignant insulinoma has improved by the introduction of new therapeutic tools [4] but it is often difficult to manage and the prognosis is poor.

References

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[4] Herder WW, Van Schaik E, Kwekkeboom D, Feelders RA. New therapeutic options for metastatic malignant insulinomas. Clin Endocrinol 2011;75 (277-284)