OUTCOME OF INSULINOMAS DIAGNOSED IN A TERTIARY ENDOCRINE CENTER

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BACKGROUND: Insulinomas, the most common functional neuroendocrine tumours of the pancreas, are usually sporadic, benign and solitary.

AIMS: To assess biochemical data, localization and treatment outcome of insulinomas diagnosed in a tertiary endocrine center.

PATIENTS and METHODS:
- 25 patients (14 F/11 M), aged 49.1±14.1 years, diagnosed with insulinoma between 2000-2014 were retrospectively reviewed. Average body mass index = 30.4 ± 7.5 kg/m².
- 72-hour supervised fast was used for diagnosis of insulinoma (plasma glucose <40 mg/dL with simultaneous insulin level >6 μIU/mL).
- computed tomography (CT), magnetic resonance imaging, endoscopic ultrasonography and intra-operative ultrasonography were performed for tumour localization.

RESULTS: Median duration of hyperinsulinemia= 2 years;
- Sporadic insulinomas: 23 patients (92%);
- MEN 1 syndrome: 2 patients (8%);
- Hepatic metastases: 2 patients (8%).

CONCLUSION: Partial pancreatectomy or enucleation provided a good cure rate in patients with pre-operative localized insulinomas.

Table 1. Biochemical and hormonal data during 72-hour fast

<table>
<thead>
<tr>
<th>Value</th>
<th>Percentiles (25th ; 75th)</th>
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<tbody>
<tr>
<td>Median duration (hours) to nadir glucose</td>
<td>8</td>
</tr>
<tr>
<td>Glucose nadir (mg/dL)</td>
<td>30.9 ± 7.1</td>
</tr>
<tr>
<td>Median insulinemia (μIU/mL) during nadir glucose</td>
<td>28</td>
</tr>
<tr>
<td>Mean C peptide (ng/mL) during nadir glucose</td>
<td>2.6 ± 1.8</td>
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Figure 1. Preoperative localization of insulinoma (n= 21 out of 25)

Mean tumour diameters: 22.3 ± 14.3 mm
Intraoperative ultrasound localization was necessary in 4 cases.

Figure 2. Therapeutic outcome

Surgery: enucleation / cephalic duodenopancreatectomy /distal pancreatectomy;
Medical treatment (diazoxide 200-300 mg/day or somatostatin analogues) were used in non-cured patients to control hypoglycemia.

CONCLUSION: Partial pancreatectomy or enucleation provided a good cure rate in patients with pre-operative localized insulinomas.