

## **Surgical Treatment of Pancreatic Insulinoma: 45 Years of Experience in a Single Center**

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**Context** Insulinoma is the most common endocrine tumor of the pancreas. Over 90% of insulinomas are benign, single and evenly distributed in head, body and tail of the pancreas. Depending on the location, they can be enucleated or may require partial pancreatectomy. **Objective** To evaluate histological features, type of surgery, early complications (within 30 days) and prognosis. **Methods** We reviewed clinical data of patients observed for organic hyperinsulinism from January 1966 to December 2010 in our Department (follow up to December 2011). **Results** From 1966 to 2010 we observed 102 patients with organic hyperinsulinism (60 females and 42 males averaging 49.5 years). We had 7 cases of hyperplasia/nodular hyperplasia, 7 multiple tumors and 7 malignant insulinomas. Localization: 32 pancreatic head, 8 neck, 21 body, 33 tail, 5 whole pancreas, 1 left ovary and 2 unknown. Surgery: 39 enucleations, 38 distal pancreatectomies, 6 central pancreatectomies, 3 DPPHR, 2 pancreaticoduodenectomies, 4 total/subtotal pancreatectomies, 3 other surgery. Perioperative

mortality was 5% (3 acute pancreatitis, 1 stroke, 1 disseminated intravascular coagulation). Perioperative morbidity was 23% (3 acute pancreatitis, 13 pancreatic fistulas, 4 abdominal abscesses, 2 pseudocysts, 1 biliary leakage). In 5 cases a second operation was necessary. Excluding malignant cases, postoperative deaths and not operated cases, 86/88 patients were cured after surgery and we had 2 cases of persistent hypoglycemia (1 hyperplasia, 1 not found). After a mean follow up of 212 months (89 patients included), 64/89 are still alive and free of disease. Among the dead patients, 3/23 died of disease progression. Among 7 malignant cases, 2/7 with lymph node metastases had a survival of 167 and 388 months after resection of the primary tumor and nodes. The median survival of the 5/7 not resected was 12 months. **Conclusion** Surgical treatment of insulinomas can be challenging and in some cases is still associated to mortality (5%). A high rate of surgical success (98%) was obtained with 5% of reoperation.