Insulinoma; is enucleation a safe option?

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Background
• Insulinomas are the most prevalent functional neuroendocrine tumors of the pancreas.
• Enucleation is often preferred to pancreatic resection because of its minimally invasive nature.

Aim
The post-operative surgical outcome in resected insulinomas

Methods
• Retrospective cohort study of resected pancreatic neuroendocrine tumors (pNET)
• Inclusion: all patients with resected insulinomas between 1992 and 2012.
• Analysis: Surgical procedure and post-operative outcome

Results

Resected pNET N = 109
Insulinomas N = 22

Enucleation N = 12
Location:
head N=8
tail N=2
central/tail N=2

Pancreatic resection N = 10
Location:
tail N=6
corpus-tail N=3
head-corpus N=1

SMS scan total N = 12/22
SMS scan positive N = 2
Women N = 12 Man N = 10
MEN-syndrome N = 3

Overall complication rate
Enucleation 7/12 = 58%
Pancreatic resection 4/10 = 40% P = 0.4

Post-operative fistula:
Enucleation 7/12 = 58%
Pancreatic resection 2/10 = 20% P = 0.1

Follow up
DM developed N = 2
Metastatic disease N = 1

Conclusion
• Enucleation was frequently performed in 55% but had a high complication rate
• Pancreatic fistula was the most frequent complication of enucleation
• Although insulinomas are usually small, a pancreatic resection is a safe alternative option

Careful patient selection and operation should be performed

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