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The analysis of EUS error sin the Detection of Insulinomas.

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Background

Ultrasound picture is the virtual representation of the morphology of organs and tissues. Endoscopic ultrasound can be used in detailed scanning of pancreas and preoperative topical diagnostics of insulinomas. Insulinoma requires surgical treatment in all cases. This fact allows control of preoperative diagnostic methods.

Aims

To define the basic groups of errors of EUS for insulinomas.

Materials and methods

Endoscopic ultrasound (EUS) was done during 7 years (2003-09) for 61 patients (12 men, 49 women; mean age 43 years, range 12 to 69 years) with sporadic insulinomas (46 patients) and associated with multiple endocrine neoplasia (MEN) syndrome (15). All patients were operated with the consecutive immunohistochemical studies for surgical specimens – **66** insulinomas were detected (uncinate process 9, head 20, neck 6, body 13, tail 18). The mean size of these tumors was 17mm (range 9 to 35mm). Among them there were 5 patients, ineffectively previously operated in another centers.

Results

EUS has revealed 62 of 66 insulinomas. One insulinoma at the tail-end of a pancreas was accepted for a bend of splenic artery. One tumour in a body of a pancreas was described as focal lesion of pancreatic parenchyma. Two tumours in a head of a pancreas at the patient with MEN-1 were described as one big lobular tumour. Two insulinomas of a neck of a pancreas were regarded as one: one was scanned from a stomach, another - from a duodenum. Both were revealed, but interpreted as a big single tumour. Besides there were two more errors in topical diagnostics: isthmus and uncinate process of a pancreas had been mixed because of a wrong corner of scanning from the duodenum.

Conclusions

After the analysis of own errors in revealing of insulinomas at EUS, we distinguished some basic groups: 1) undetected insulinomas, 2) a wrong quantitative estimation revealed insulinomas, 3) errors of topical diagnostics.