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Management of Small Asymptomatic Nonfunctioning Pancreatic Neuroendocrine Tumors: Limitations to Apply Guidelines into Real Life

Valentina Andreasi[1]; Stefano Partelli[1]; Michele Mazza[1]; Francesca Muffatti[1]; Stefano Crippa[1]; Domenico Tamburrino[1]; Massimo Falconi[1]

[1]San Raffaele Scientific Institute

BACKGROUND: International guidelines suggest a watchful strategy for small nonfunctioning pancreatic neuroendocrine tumors. The aim of this study was to evaluate the management and indications for surgery in patients with asymptomatic nonfunctioning pancreatic neuroendocrine tumors ≤ 2 cm.

METHODS: Patients with asymptomatic, incidental, sporadic nonfunctioning pancreatic neuroendocrine tumors ≤ 2 cm without nodal or distant metastases were included (2012-2016). A comparison between active surveillance and surgery groups was performed.

RESULTS: Of the 101 included patients, 72% underwent active surveillance and 28% were surgically treated. Patients submitted to surgery were significantly younger (53 vs 60 years, P = 0.013), had a higher incidence of positive 18F-fluorodeoxyglucose positron emission tomography (18F-FDG PET) (18% vs 50%, P = 0.003), and a higher incidence of cytologically determined G2 tumor (0% vs 14%, P = 0.008). Conservatively managed patients had a significantly smaller tumor size (12 vs 16 mm, P = 0.0001). The main reasons determining the surgical choice were as follows: patient's preference (32%), positive 18F-FDG PET (21.5%), main pancreatic duct dilation (17.5%), cytologically determined G2 tumor (14.5%) and young age (14.5%). At a median follow-up of 40 months, all of the 73 patients

conservatively managed were alive, with no evidence of distant metastases and none underwent surgery. Only 5 patients had a tumor growth > 20%.

CONCLUSION: One third of patients with asymptomatic small nonfunctioning pancreatic neuroendocrine tumors ≤ 2 cm underwent surgery. Patient's preference, initial tumor size and young age were the main determinants of surgical indication. Preoperative diagnostic workup, including 18F-FDG PET and cytologic grading seem to be poorly accurate in determining malignant features in these small lesions.