Natural History of Small Sporadic Non-Functioning Pancreatic Neuroendocrine Tumors: An Observational Bi-Centric Study

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Context Asymptomatic sporadic non-functioning well-differentiated pancreatic neuroendocrine tumors (AS-NF-PNET) are increasingly diagnosed, and their management is controversial because of their overall good but heterogeneous prognosis. Objective The aim of the present study was to assess the natural history of AS-NF-PNET below 2 cm in size, and the benefit-risk balance of a non-operative management. Methods From January 2000 to June 2012, 46 patients with proven AS-NF-PNET below 2 cm in size were followed-up for at least 18 months with serial imaging. Results Patients were mainly female (65%), with a median age of 60 years. Tumors were mainly located in the pancreatic head (52%), with a median lesion size of 13 mm (range: 9-15 mm). Distant or nodal metastases appeared on imaging in none of the patients after a median follow-up of 34 months (range: 24-52 mm) and an average of 4 (range: 3-6) serial imaging. A ≥20% increase in size was observed in 6 (13%) patients. Overall median tumor growth was 0.12 mm per years and nor patients neither tumor characteristics were found to be significant predictors of tumor growth. Overall, 8 patients (17%) underwent surgery after a median time from initial evaluation of 41 months (range: 27-58 months); all resected lesions were ENETS T stage 1 (n=7) or 2 (n=1), grade 1, node negative, with neither vascular nor peripancreatic fat invasion. Conclusion In selected patients non-operative management of AS-NF-PNET below 2 cm in size is safe. Larger and prospective multicentre studies with long-term follow-up are now needed to validate this “wait and see” policy.