AB082. P054. Non-functional pancreatic neuroendocrine tumor (NF PNET) imaging and evaluation using ^{18}F-FDG and ^{68}Ga-DOTANOC-PET/CT: initial data of a prospective study

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Background: Predicting aggressive behavior of non-functional pancreatic neuroendocrine tumor (NF PNET) still remains controversial. It is known that lymph node metastases are rare but possible also on small (1–2 cm) NF-PNET. Positive ^{18}F-FDG-PET/CT avidity is associated with poor prognosis in NETs. This study aims to evaluate the possibility to enhance diagnostic accuracy by using dual trace functional imaging ^{18}F-FDG and ^{68}Ga-DOTANOC PET/CT in patients with NF PNET.

Methods: In this prospective study 29 patients underwent PET-imaging with two tracers, ^{18}F-FDG and ^{68}Ga-DOTANOC, followed by surgery or endoscopic ultrasonography biopsies (EUS-FNA) with follow-up. The imaging results were compared to a histology report.

Results: Average tumor size was 36 mm (range, 9–103 mm). Twenty-seven patients had a ^{68}Ga-DOTANOC positive (sensitivity 96%) and 10 had an ^{18}F-FDG positive tumor. One had a ^{18}F-FDG positive, ^{68}Ga-DOTANOC negative tumor with multiple lymph node metastases (LN+). Histology reports were available for 24 patients: 4 EUS-FNA (of which 2 are waiting for surgery) and 20 operated. Five patients are only followed-up (on average 5 months). Five out of 18 patients had LN+ tumor of which 2 were ^{18}F-FDG positive. There were WHO Gr1 tumors in 11 patients, WHO Gr2 in 7 patients, Gr3 in 1 patient and 1 MANEC. Tumors were 18F-FDG positive 5/11 Gr1 tumors (3 over Ø 9 cm, 1 LN+), 4/7 Gr2 tumors (2 LN, 1 only EUS-FNA) and 1/1 Gr3 tumor. MANEC was ^{18}F-FDG negative. 2 of 5 LN+ patients had ^{18}F-FDG positive tumor.

Conclusions: The high sensitivity of ^{68}Ga-DOTANOC-PET/CT in differential diagnosis of a hypervascular pancreatic lesion is known. Our initial findings suggest that ^{18}F-FDG-PET/CT can be used to discriminate tumor grades but not lymph node status of NF PNET.

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