

**Long-term Outcome of Conservative Management versus Surgery for Nonfunctioning Pancreatic Neuroendocrine Neoplasms  $\leq$  2cm in Patients with Multiple Endocrine Neoplasia type 1**

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**Background:** Surgery represents the best treatment for both functioning and NF-pNEN > 2 cm but many controversies still remain on the optimal management of NF-pNEN  $\leq$  2 cm. Aim of this study was to evaluate the efficacy of a conservative treatment for NF-pNEN  $\leq$  2 cm in MEN1-affected patients compared with a surgical treatment.

**Methods:** This was a retrospective study conducted between 1997 and 2013. Databases of 4 tertiary-referral institutions (San Raffaele Scientific Institute, Milan; University of Marburg, Marburg; University of Padua, Padua; The Royal Free Hospital, London) were interrogated. We included 60 patients affected by MEN1 syndrome with NF-pNEN  $\leq$  2 cm. Comparison of conservative management versus surgery at initial diagnosis of NF-pNEN  $\leq$  2 cm was performed.

**Results:** Overall, 27 patients (45%) underwent up-front surgery and 33 patients (55%) were followed-up at initial diagnosis. A higher proportion of patients in the surgery group were female (70% versus 33%,  $P=0.004$ ). Patients were mainly operated in the period 1997-2007 ( $n=17$ , 63% versus 37%,  $P=0.040$ ). The rate of multifocal tumors was higher in the surgical group ( $n=24$ , 89%) compared with no surgery group ( $n=22$ , 67%,  $P=0.043$ ). The radiological tumor size was larger in the surgery group (16 mm versus 10.5 mm,  $P<0.0001$ ). After a median follow-up of 126 months, one patient deceased for postoperative complications. The 5-, 10-, and 15-year the PFS rates were 63%, 39%, and 10%, respectively. The median PFS were similar between the two groups. Overall, 13 patients (32.5%) were operated after an initial surgical or conservative treatment. The majority of surgical treated patients had stage 1 (77.5%), T1 (77.5%) and G1 (85%) tumors.

**Conclusions:** NF-pNEN  $\leq 20$  mm in MEN1 patients are indolent neoplasms with a low oncological risk. Surgical treatment of these tumors at initial diagnosis is rarely justified in favour of a conservative treatment.