

Surgical Indication in Patients with Pancreatic Cystic Lesions

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Context In the last twenty years the knowledge of natural history of the pancreatic cystic lesion have changed as well as many improvement in radiological diagnosis has been observed. **Objective** To evaluate the factors influencing surgical indication in patients with pancreatic cystic tumors.

Methods From January 1990 to January 2013, 253 patients with pancreatic cystic tumors were observed. Demographics, clinical, radiological, surgical, pathological and follow-up-data were collected prospectively from 2000. The surgical indication was based by clinical examination, CT scan and evaluation of CA 19.9. After 2006, we introduced routinely the use of MRI in first radiological evaluation. All non-surgical managed patients were followed with annual clinical and radiological examination and evaluation of CA 19.9. Uni- and multi-variate analyses were carried out.

Results One-hundred and twenty-five patients (49.4%) received surgical indication. Univariate analysis showed that mean age of operated patients was lower than those in follow-up (60 vs. 70 years; $P<0.001$). Patients in surgical arm were more frequently symptomatic (57.6% vs. 5.5%; $P<0.001$) and they presented cystic lesion larger than those in

follow-up (52 vs. 19 mm, $P<0.001$). Cystic tumors treated was more frequently single (75.6% vs. 53.9%; $P<0.001$), with solid component (20.8% vs. 2.3%; $P<0.001$), septa (57.6% vs. 36.7%; $P=0.001$) or Wirsung dilated (29.6% vs. 14.1%; $P=0.004$). Complete radiological evaluation (including CT scan and MRI or EUS) was performed more frequently in non surgical patients (85.9% vs. 33.6%; $P=0.001$). IPMN type II (79.7%) was the radiological diagnosis more frequent in follow-up group while 40.8% of patients was operated without a proper radiological diagnosis ($P<0.001$). Patients studied before 2000 were more frequently operated (44.8% vs. 0%). Multivariate analysis confirmed that presence of symptoms ($OR=13$; $P<0.001$), increase of size ($OR=2$; $P<0.001$), dilated Wirsung ($OR=7$; $P=0.004$), solid component ($OR=25$; $P=0.002$) and septa ($OR=5$; $P=0.005$) increased the odds of surgery. Increase of age ($OR=0.9$; $P<0.001$) and complete radiological evaluation ($OR=0.2$; $P=0.010$) reduced independently the odds of surgery. **Conclusion** The surgical indication remains still associated to presence of symptoms, size of tumors, solid component or septa.