

Cytology and CEA from Cystic Fluid Have Marginal Utility in the Management of Pancreatic Cystic Neoplasms

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Context The management of patients with cystic lesion of the pancreas still remains controversial, mainly because traditional cross-sectional imaging have a limited ability to differentiate benign from premalignant or malignant pancreatic cysts. Endoscopic ultrasound (EUS) has been increasingly used in clinical practice, and the value of sample cyst fluid with fine-needle aspiration for cytology (FNAC) or fluid CEA concentration has been reported to be useful for risk assessment of malignancy in pancreatic mucinous cysts [1]. **Objective** The aim of this study was to determine whether EUS and cyst fluid analysis for cytology and CEA determination may be predictive of malignancy in a series of patients investigated for cystic neoplasms of the pancreas. **Methods** From January 2009 to June 2011, 51 patients underwent EUS in the preoperative work-up for suspected cystic tumor of the pancreas. Whenever possible, aspiration of cyst fluid for cytology and cyst fluid analysis for CEA, CA 19-9, amylase and lipase determination were performed. All patients underwent also abdominal MRI and whole-body PET/CT. Patients with symptoms or radiological or cytological suspicion of premalignant or frankly malignant lesion underwent surgical treatment. In the remaining patients validation of diagnosis was obtained by follow-up. Median follow-up was 23 months, range 12-41 months. **Results** There were 24

males and 27 females (mean age 52.7 years, range 34-81 years). The mean cyst size was 3.4 cm (range 2.0-12 cm). In all, 10 patients were symptomatic and 24 underwent surgery (47%). Diagnosis included: 29 IPMNs, 7 malignant mucinous cysts, 2 solid-pseudopapillary tumors, 2 mucinous cystadenomas, 8 serous cystadenomas, 1 endocrine tumor, and 2 pseudocysts. Cytology and cyst fluid analysis were performed in 49 patients. Cytology was positive in 3/7 malignancies, 1/2 solid pseudopapillary tumors, doubtful in 1 IPMN, negative in 28 benign cysts, inconclusive in the remaining 11 patients. CEA was >200 ng/mL in 8 patients (>1,000 ng/mL in 5): only 2 patients proved to have malignant tumor. PET/CT was positive in 6/7 malignant tumors and false positive in 1 IPMN with low-grade dysplasia. **Conclusion** The correct evaluation of pancreatic cystic neoplasms remains challenging. The decision to proceed with operative or non operative management should not be based on cytology or CEA levels in the cyst fluid aspirate.

References

1. Genevay M, Mino-Kenudson M, Yaeger K, Konstantinidis IT, Ferrone CR, Thayer S, et al. Cytology adds value to imaging studies for risk assessment of malignancy in pancreatic mucinous cysts. *Ann Surg* 2011; 254:977-83.