Multiple small "imaging" branch-duct type intraductal papillary mucinous neoplasms (IPMNs) in familial pancreatic cancer: indicator for concomitant high grade pancreatic intraepithelial neoplasia?

Abstract:
Most screening programs for familial pancreatic cancer are currently based on endoscopic ultrasonography and/or magnetic resonance imaging (MRI). Cystic lesions, especially those suspicious for small intraductal pancreatic mucinous neoplasms (IPMNs) of the branch ducts, can be visualized in up to 40% of individuals at risk, but their pathological importance in the setting of FPC is yet not well established. Individuals at risk from a prospective screening program for familial pancreatic cancer with small "imaging" IPMNs of the branch-duct type (BD-IPMN) who underwent pancreatic resection were analysed regarding clinico-pathological data and the locations of pancreatic lesions. Five of 125 individuals at risk who underwent screening had multiple small (size 2-10 mm) unicystic lesions and/or multicystic single lesions in the pancreatic body and tail suspicious for BD-IPMNs upon MRI imaging and decided to undergo surgical resection after interdisciplinary counselling, although none fulfilled the consensus criteria for IPMN resection. Histological examination revealed BD-IPMNs with low or moderate dysplasia of the gastric type in combination with multifocal PanIN2 and PanIN3 lesions in 4 individuals. The remaining patient had only tiny
ductectasias in the pancreatic tail with multifocal PanIN 2 lesions in the entire gland and one PanIN3 lesion in the pancreatic head. Intriguingly, the location of the most dysplastic histological lesions (PanIN3) did not correspond to the preoperatively detected lesions and were not visible in preoperative imaging. In the setting of FPC, the presence of multiple small "imaging" BD-IPMNs may indicate the presence of high-grade PanIN lesions elsewhere in the pancreas.