

AB017. S017. Is main pancreatic duct dilation really an independent risk factor for malignancy in main-duct and combined-IPMNs?

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Background: In main duct (MD) or combined main duct (CMD) intraductal papillary mucinous neoplasm (IPMN) pancreatic duct (MPD) diameter between 5–9 mm is identified by International Association of Pancreatology (IAP) guidelines as a worrisome feature (WF) requiring close follow-up. However, some authors argue that the risk of degeneration in these patients is already high enough to recommend surgery. The aim is to evaluate the significance of the MPD diameter at preoperative imaging as an independent predictor of high-grade dysplasia (HGD)/adenocarcinoma (ADK) in MD-/CMD-IPMN.

Methods: Prospectively collected data was analyzed of patients undergoing pancreatic resection for IPMN at three high-volume pancreatic centers between 2009 and September 2017. MPD diameter was measured preoperatively with magnetic resonance imaging (MRI), computed tomography (CT) or endoscopic ultrasound (EUS).

Results: Two hundred and sixty-three pts underwent pancreatic resection for either a MD (14.8%) or CMD-IPMN (71.7%). Of these, 179 (68.1%) had HGD/ADK (77.8% in MD-IPMNs; 66.4% in CMD-IPMNs). Among the pts with HGD/ADK, 88.8% had at least one high-risk

stigmata (HRS). Of the 98 patients with MPD >10 mm, 77.6% had degenerated IPMNs. A HGD/ADK was found in 81/122 (66.4%) patients with MPD 5–9 mm. However, 69 (85.2%) of these had at least one HRS and 10 had at least one other WF. Of the remaining two pts, one had elevated preoperative Ca19.9 and the other had only micro-foci of carcinoma at pathology. Thus, most patients with HGD/ADK would have had other indications for surgery beyond MPD 5–9 mm according to IAP guidelines. ROC curve analysis identified 8.5 mm as the optimal cut-off to distinguish low grade and high grade/invasive IPMNs [area under the curve (AUC) 0.66]. This cut-off was used in univariate analysis (OR =3.06, P<0.01) with jaundice (OR =7.9, P<0.01), the presence of nodules as an ordinal variable comprising non-enhancing (OR =1.1, P=0.81), enhancing (OR =4.2, P<0.01) and macroscopic solid component (OR =5.8, P<0.01), positive cytology (OR =14.8, P<0.01), elevated Ca19.9 (OR =5.2, P<0.01) and pancreatitis, cyst \geq 3 cm, thickened wall, abrupt MPD change and altered glucose tolerance which were not statistically significant. Multivariate analysis identified MPD \geq 8.5 mm (OR =7.8, P<0.01), enhancing nodules (OR =8.7, P=0.01), positive cytology (OR =12.2, P<0.01) and elevated Ca19.9 (OR =3.37, P=0.01) as independent predictors of malignancy.

Conclusions: Our study confirms that, while for diameters \geq 1 cm the risk of degeneration is high and surgical treatment must be recommended, smaller MPD diameters without other HRS do not appear to be as strongly linked to malignancy. A diameter of 8.5 mm was identified as the optimal cut-off with significant correlation to IPMN degeneration at multivariate analysis.

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