Pathological evaluation and reporting of intraductal papillary mucinous neoplasms of the pancreas: the correlation and analyzes of the histopathologic patterns

Carolin Desire Nava Perez
Hospital Sirio Libanes, Brazil

**Introduction:** Papillary-mucinous neoplasms (IPMN) are a heterogeneous group of pancreatic tumors mucin-producing with uncertain biologic behavior. Nowadays, they can also be considered as a precursor of pancreatic carcinoma (PAC).

**Aim:** The aim of this study is to analyze the IPMN subtypes distribution related with clinicopathological, histologic and immunohistochemical and to identify which one is more related to development of malignancy.

**Methods:** This prospective study reports a 3-years follow up, with consecutive patients, where we analyzed the clinical findings, radiological aspects, and morphologic features in patient’s suspects of IPMN or PAC undergoing pancreatic surgery. The lesions were classified based on morphology and immunohistochemically defined by the current WHO criteria.

**Results:** We analyzed 28 patients (16 women), mean age 66 y-old (range 50-83). 15 (53%) patients were asymptomatic, and 13 (47%) showed abdominal pain (8), chest pain (4), and recurrent acute pancreatitis (1). 10 patients were submitted to subtotal pancreatectomy, 9 to duodenopancreatectomy, 7 to gastroduodenopancreatectomy, 2 subtotal pancreatectomy and splenectomy. The neoplasm was located in head, body and tail, and entire pancreas in 18, 9, and 1, respectively. 14 patients (50%) had involvement of the main pancreatic + branch ducts (mixed type), 7 (25%) had only the main pancreatic duct involved, 6 (21.5%) had only the branch-duct involved, and 1 (3.5%) had not informed. The mean size of the lesion was 3.3 cm + 6.1 (1-11 cm). Morphological features showed multi-loculated (23) solid-cystic (4) and solid (1). MUC1, MUC5AC, and MUC2 immunohistochemically expressed in 18 (64%), 17 (61%), and 11 (39%), respectively. The histopathologic patterns founded was gastric-type (9), intestinal-type (3), pancreatobiliary-type (9), mixed-type (6 Pb-t + I-t (4), and Pb-t + G-t (2)), and oncocytic-type (1). The IPMN with a low-grade, and high-grade dysplasia and invasive carcinoma was found in 18 (64.2%), 6 (21.5%) and 4 (14.2%), respectively. We observed that all pancreatic intraepithelial neoplasia (PanIN) founded was related to Pbt 13 (46%). The invasive PAC was presented in 4 patients (14.2%) with the following subtypes (Pb-t (2), and Pb-t + I (1)), and colloid PAC [I-t (1)]. Was found a synchronic neoplasia in 2 patients (colon adenocarcinoma, and NET).

**Conclusion:** IPMN of the pancreas is a common cystic lesion located more frequent on both duct (mixed-type). showing more aggressive behaviour than other patterns. Pb-t was the most common lesion and was more connecting to invasive PAC and HGD, as well as connected with PanIN. Prospective studies are needed to confirm these findings.

carolinnava@gmail.com