

膵上皮内病変におけるムチンとCD10の発現解析

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Analysis of mucins and CD10 expression in pancreatic intraductal neoplasia

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Abstract

Background & Aims: Adequate nomenclature for precancerous lesions is essential for the understanding of carcinogenesis. Nowadays, it is believed that invasive ductal carcinoma of the pancreas (IDC) is developed from histologically well-defined precursor ductal lesions known as “pancreatic intraepithelial neoplasia” (PanIN). The PanINs are graded as PanIN-1A, -1B, -2, and -3, according to the atypia. Mucins are high molecular weight glycoproteins having oligosaccharides attached to serine or threonine residues of the mucin core protein backbone by *O*-glycosidic linkages. These mucin genes are differentially expressed by different cells and organs. Since synthesis and secretion of mucin is a common feature of glandular epithelial tissues, my laboratory have investigated the expression of mucin antigens mainly in adenocarcinomas. The study examined alterations in the pattern and level of expression of several mucins (MUC1, MUC2, MUC4, MUC5AC, and MUC6) and most popular small intestinal type-brush border marker (CD10) in the PanIN lesions.

Methods: From the surgically resected 18 specimens (3 specimens with chronic pancreatitis, 10 specimens with intraductal papillary-mucinous adenoma, and 5 specimens with IDC), I selected 9 normal ducts, 80 PanIN lesions (PanIN-1A, 35; PanIN-1B, 20; PanIN-2, 18; PanIN-3, 7), and 8 IDC lesions. Expression profiles of the mucins and CD10 in the normal ducts, PanIN lesions and IDC lesions were examined by using immunohistochemistry.

Results: MUC1 was expressed in 33% of normal ducts, 20% of PanINs-1A, 20% of PanINs-1B, 44% of PanINs-2, 57% of PanINs-3, and 88% of IDCs. MUC2 was not expressed in any PanINs nor IDCs. MUC4 was not expressed in normal ducts, but was expressed in 14% of PanINs-1A, 5% of PanINs-1B, 11% of PanINs-2, 14% of PanINs-3, and 38% of IDCs. MUC5AC was not expressed in normal ducts, but was expressed in 83% of PanINs-1A, 90% of PanINs-1B, 100% of PanINs-2, 71% of PanINs-3, and 88% of IDCs. MUC6 was expressed in 67% of normal ducts, 83% of PanINs-1A, 75% of PanINs-1B, 72% of PanINs-2, 57% of PanINs-3, and 38% of IDCs. CD10 was expressed in 67% of normal ducts, 23% of PanINs-1A, 60% of PanINs-1B, 17% of PanINs-2, 14% of PanINs-3, and 13% of IDCs. The results showed over expression of MUC1, a pan-epithelial mucin, and MUC6, a gastric pyloric glandular mucin, and de novo expression of MUC4, a respiratory epithelial

