Clinicopathologic and tumorigenic differences between immunohistochemical subtypes in ampullary region carcinoma

（十二指腸乳頭部癌の組織亜型における臨床病理学的特徴と発癌過程の相違）
Abstract

Background. Ampullary region carcinoma (ARC) is morphologically classified into pancreatobiliary and intestinal subtypes. The present study aimed to evaluate the consistency of histologic and immunohistochemical classifications and to investigate their clinicopathologic and tumorigenic features.

Methods. Surgically resected 56 consecutive cases with ARC were immunohistochemically classified into pancreatobiliary and intestinal types using cytokeratin (CK) 17 and CDX2 for the assessment of their clinicopathologic characteristics. Furthermore, the differences of cancer progression and aggressive behavior between these subtypes were also examined, paying attention to MUC1 and E-cadherin expressions.

Results. Immunohistochemically, 34 cases were classified as intestinal type, 17 as pancreatobiliary type, and 5 as other type, which was in good agreement with histologic classification. Although tumor size was similar, the incidence of high pathologic T factor and lymphatic, vascular and perineural invasions were significantly frequent in tumors with pancreatobiliary type. In multivariate analysis, this immunohistochemical subtype was found as an independent prognostic factor. Positive MUC1 and reduced E-cadherin expressions were observed in 13 and 8 cases with pancreatobiliary type, whereas these were in 9 and 3 cases with intestinal type. MUC1 expression was more frequently even in borderline and suggestive malignant lesions in association with the pancreatobiliary type carcinoma than with the intestinal type carcinoma.

Conclusions. Immunohistochemical expression using CDX2 and CK17 allows a reproducible classification of ARC, which might be of great clinical significance. The pancreatobiliary type was more invasive than the intestinal type, which may attribute to
different tumorigenic pathways and different biological characteristics indicated by MUC1 and E-cadherin expressions.