

Changes in expression of bile canalicular CD10 and sinusoidal CD105 (endoglin) in peritumoral hepatic tissue

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ABSTRACT

Aims and background. Hepatic tissues, including bile canaliculi and sinusoids, around primary or metastatic tumors are destructed and regenerate associated with tumor growth, and may show some phenotypic changes. The present study was undertaken to examine the expression of CD10 in bile canaliculi [CD10(BC)] and CD105 (endoglin) along hepatic sinusoids [CD105(HS)] in peritumoral hepatic tissue (PTH).

Methods. Fifty samples of resected liver bearing hepatocellular carcinoma (HCC) or metastatic carcinoma were immunostained for CD10 and CD105. The immunoreactivity for CD10(BC) and CD105(HS) in the background hepatic tissue of tumors and PTH was scored separately.

Results. CD10(BC) was moderately or markedly expressed in the background hepatic tissue without chronic hepatitis or cirrhosis in most of the cases, and was significantly downregulated in chronic hepatitis and cirrhosis. CD105(HS) was negative or minimally positive in most of the cases of hepatic tissue bearing metastatic carcinoma, and showed a significant increase in chronic hepatitis and cirrhosis. Compared with the background, PTH revealed significantly decreased CD10(BC) staining irrespective of HCC or metastatic carcinoma, and showed belt-like CD105(HS) expression in 66.7% of the cases of metastatic carcinoma and in 88.6% of those with HCC.

Conclusions. These data indicate that the expression patterns of CD10(BC) and CD105(HS) in PTH are similar to those in chronic hepatitis and cirrhosis, which may be caused by persistent injury and resultant regeneration of hepatic tissue.

Key words: CD10, CD105 (endoglin), peritumoral hepatic tissue, immunohistochemistry.

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