

Publication

Expression of the extracellular matrix protein periostin in liver tumours and bile duct carcinomas

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AIMS: To study the relevance of periostin, known to be involved in epithelial-mesenchymal transition (EMT), in hepatocellular and bile duct cancer. **METHODS AND RESULTS:** Immunohistochemical periostin expression was semiquantitatively analysed in normal liver tissue (n = 20), hepatocellular carcinoma (HCC; n = 91), liver-cell adenoma (n = 9), focal nodular hyperplasia (n = 13) and bile duct carcinomas (BDC; n = 116) using tissue microarrays. Normal bile ducts, gallbladder epithelium and hepatocytes showed weak cytoplasmic periostin expression. In HCC, there was strong epithelial periostin expression in 19/91 (20.9%) and strong stromal periostin expression in 10/91 cases (11%). Epithelial expression in tumour cells was significantly associated with a higher tumour grade (P <0.05) and hepatitis B virus infection (P = 0.007). Importantly, there was no strong periostin expression in benign liver tumours. Strong stromal periostin expression was detected in 78/116 (67.2%) BDC and strong epithelial expression in 39/116 (33.6%) BDC. pT stage, differentiation grade and proliferation rate in primary BDC were independent of periostin expression. Epithelial periostin expression was associated with reduced overall survival on univariate and multivariate analysis. **CONCLUSIONS:** The EMT protein periostin is expressed in the stroma and epithelium of a subset of BDC and HCC. Epithelial periostin expression is a marker for malignant transformation of hepatocytes and a novel prognostic marker in BDC

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