

Immunohistochemical study on p53, H-rasp21, c-erbB-2 protein and proliferating cell nuclear antigen expression in tumor tissues of Han and minority ethnic patients with primary hepatic carcinoma in Xinjiang

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Abstract

AIM: To find out if there is any difference in human primary liver carcinogenesis between Han and minority ethnic patients in Xinjiang.

METHODS: Expression of p53, c-erbB-2, H-rasp21 protein and proliferating cell nuclear antigen (PCNA) in tumor tissues of 50 patients (Han 38, minorities 12) with primary hepatic carcinoma (HCC) was detected by immunohistochemistry (LSAB).

RESULTS: The positive frequency of p53, c-erbB-2, H-rasp21 and PCNA expression was 46.0% (23/50), 70.0% (35/50), 68.0% (34/50)

and 82.0% (41/50) in tumor tissues; 4.0% (2/50), 22.0% (11/50), 64.0% (32/50) and 52.0% (26/50) in peritumor respectively with a significant difference, except for H-rasp21 ($P < 0.05$) between tumor and non-tumor tissues. Combined the three oncogenes alteration, 26% (13/50) tumor tissues had positive immunoreactivity, but peritumor and normal liver were negative. The positive p53, c-erbB-2, H-rasp21 protein expression was 39.5% (15/38), 60.5% (23/38) and 39.5% (15/38) in tumors of Han patients; 66.7% (8/12), 100% (12/12) and 75.0% (9/12) in minority patients respectively. A statistical difference between Han and minority cancer samples was observed ($P < 0.05$).

CONCLUSION: Overexpression of p53, c-erbB-2 and H-rasp21 in human primary liver carcinoma is an important biomarker of genetic alteration. The different frequency of these oncogenetic changes may reflect some environmental factors or/and ethnic hereditary affecting the liver carcinogenesis. The special life style of Han, Uygur, Kazak and Mongolia nationalities in Xinjiang may also involve the etiopathogenesis of this disease.

Key words: Liver neoplasms/etiology; Oncogenes; X nationality; Environment; Genes, p53; Immunohistochemistry

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