

CLINICAL CORRELATION BETWEEN ALPHA-FETOPROTEIN AND CHRONIC HEPATITIS C OR LIVER CIRRHOSIS

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BACKGROUND: Chronic hepatitis C (CHC) has a significant association with the development of liver cirrhosis and hepatocellular carcinoma (HCC). Alpha-fetoprotein (AFP) is an important serum marker used to diagnose HCC. Elevated AFP in chronic liver disease without HCC may also be found.

AIMS: To evaluate the clinical correlation between AFP elevation and CHC or liver cirrhosis.

METHODS: From April 1999 to November 2004, 654 CHC subjects were selected by chart review. Inclusion criteria: (1) CHC patients with positive HCV-RNA, (2) No evidence of HCC by abdominal sonography, computer tomography and/or magnetic resonance imaging. HCV genotype was classified by INNO-LiPa assay, HCV viral load was quantified by b-DNA assay (Versant 3.0) and Histological activity index (HAI) was graded using Knodell HAI scores.

RESULTS: The prevalence of AFP elevation (≥ 15 ng/ml) was 23.9%, Fibrosis stage F0-2: 26/291(8.9%), F3: 28/113 (24.8%), F4: 83/198 (42.9%). By univariate analysis, AFP level was significantly associated with age, fibrosis stage 3/4, HAI ≥ 7 , AST, ALT, AST/ALT ratio and total bilirubin. The AFP level was not associated with sex, HCV genotype and viral load. Multivariate analysis revealed age (≥ 55 vs < 55 years, OR: 3.147, 95% CI: 1.326-7.270), HAI inflammation (Inflam) score (≥ 7 vs < 7 , OR: 6.916, 95% CI: 2.745-17.424) and fibrosis stage (3/4 vs 0~2, OR: 2.722, 95% CI: 1.172-6.321) were related to AFP elevation. Using the cutoff value of AFP ≥ 6.0 ng/ml, the sensitivity and specificity to diagnose fibrosis stage F3/4 were 74.3% and 68.4%, respectively. Using the cutoff value of AFP ≥ 15.0 ng/ml, the sensitivity and specificity to diagnose fibrosis stage F3/4 were 35.7% and 91.1%, respectively.

CONCLUSION: AFP elevation was observed in 23.9% of patients with CHC in this study. AFP elevation had positive correlations with age, inflammation score and fibrosis stage F3/4.

Keywords : Alpha-fetoprotein, Chronic Hepatitis C , Liver Cirrhosis