

P53 as potential biomarker for prediction of de novo Hepatocellular carcinoma previously treated with direct- acting antivirals for hepatitis C virus

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Recent reports suggested that direct-acting antivirals (DAAs) might favor hepatocellular carcinoma (HCC). Material and methods: Chronic hepatitis C (CHC) patients (n=83) were divided into three groups: CHC patients (n=25) didn't develop hepatocellular carcinoma (HCC) after undergoing DAA therapy, CHC patients (n=25) developed de novo HCC after undergoing DAA therapy and CHC patients (n=33) developed HCC without undergoing DAA therapy. Alfa - Fetoprotein (AFP) were determined using immunofluorescence assay and P53, and hepatocyte growth factor (HGF) were determined using a quantitative sandwich enzyme immunoassay technique. The multiple logistic regression models were analyzed to estimate the odds ratios (ORs) for the association between enhanced blood markers levels and susceptibility to CHC de novo HCC undergoing DAAs. The Area under the curve (AUC) was performed to evaluate the discriminating value of each biomarker. Results: The median of AFP (U/L), P53 (pg/ml) and HGF (pg/ml) in CHC were (9.5; 22 and 415); in CHC de novo HCC undergoing DAAs were (79; 132 and 652); in HCC without undergoing DAAs were 43; 28 and 626. The multiple logistic regression analysis showed that the increase in P53 levels was significantly ($P = 0.004$) associated with susceptibility to presence of CHC de novo HCC undergoing DAAs. For discriminating CHC form CHC develop de novo HCC after undergoing DAA therapy and for discriminating de novo HCC developed after undergoing DAA from HCC without undergoing DAAs, p53 was the most efficient marker among other markers with AUCs were 0.82 and 0.79; respectively. In conclusion: P53 may serve as a prognostic marker for CHC develop de novo HCC after undergoing DAA therapy.