Serum Vascular Endothelial Growth Factor AND ANGIOSTATIN as Potential Markers in Patients with Hepatocellular Carcinoma

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Abstract:

Objective: to evaluate the prognostic role of serum VEGF and angiostatin levels in patients with HCC. Patients and methods: Between April 2010 and April 2012, 40 patients diagnosed with HCC, presented to the Departments of Gastroenterology and clinical oncology, Assiut Univ. Hospital were recruited in this study. The control group consisted of 40 healthy individuals and another group of 40 cirrhotic patients with no evidence of HCC attending the Gastroenterology clinic of our hospital were included. Serum samples were prospectively collected from all groups for estimation of α-FP, VEGF, and angiostatin levels using ELISA technique. Patients with HCC were managed according to the BCLC strategy. All patients were reviewed in the Gastroenterology and oncology clinics at least every 1 to 2 months. Results: The mean serum VEGF concentrations (632.3±5.1 pg/mL) were significantly higher in patients with HCC than in liver cirrhosis patients and healthy controls (mean value148.0±23.32 pg/mL, and 45.0±6.4 pg/mL, respectively) (P < 0.05). In addition, HCC patients showed increased serum VEGF concentrations with increased BCLC score (Odd’s Ratio1.05 - 95% confidence interval 1.11–3.9). On multivariate analysis, serum VEGF level was an independent prognostic factor (hazard ratio 1.86 (95 per cent confidence interval 1.10 to 3.92); P = 0.032). We also found that angiostatin levels were significantly lower in HCC patients compared with patients with liver cirrhosis and control subjects (P

Keywords:

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