

Serum human endothelial cell-specific molecule-1 (endocan) and vascular endothelial growth factor in cirrhotic HCV patients with hepatocellular carcinoma as predictors of mortality

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Anas A Youssef¹, Hisham A Issa¹, Maha Z Omar², Eman G Behiry¹, Asmaa A Elfallah¹, Ali Hasaneen³,
Mohamed Darwish³, Dalia B Ibrahim⁴

¹Department of Clinical and Chemical Pathology, Faculty of Medicine, Benha University, Benha, Egypt; ²Department of Hepatology, Gastroenterology

& Infectious Diseases, Faculty of Medicine, Benha University, Benha, Egypt; ³Department of Internal Medicine, Faculty of Medicine, Benha University, Benha, Egypt; ⁴Department of Clinical and Chemical Pathology, Al Tahrir Hospital, Giza, Egypt

Objectives: The aim of this study was to assess serum levels of endocan & VEGF in patients with hepatitis C virus-related HCC and their diagnostic and predictive value of mortality. **Methods:** A total of 195 patients with CHC were subdivided into the following two groups: 105 HCV cirrhotic patients with HCC and 90 HCV cirrhotic patients without HCC. Sixty apparently healthy subjects served as the control group. The serum VEGF and endocan were assessed by ELISA.

Results: The mean serum endocan level was 4257.6 ± 847.6 pg/mL in HCC patients, compared to 2099.2 ± 459.6 pg/mL in liver cirrhosis patients without HCC. VEGF levels in the HCC group were non-significantly higher than those of the non-HCC group, and control group. Endocan at cut-off value 2967 pg/ml had higher sensitivity and higher specificity in diagnosis of HCC than AFP and VEGF. The median follow up period was 9 months, survival curve analysis was done in HCC group and showed that probability of survival among HCC group with higher levels of VEGF and endocan were significantly lower than that patients with low levels. In HCC patients, elevated serum endocan levels were significantly associated with poor hepatic functions and a greater number and size of tumours. Multivariate analysis showed that serum endocan levels (≥ 4000 pg/ml), as well as elevated serum fetoprotein (>100 ng/dl), were independent prognostic biomarkers for mortality.

Conclusion: Endocan may be a useful diagnostic marker for HCC and a good predictor of mortality, especially when combined with AFP and VEGF.

Keywords: hepatocellular carcinoma, endocan, VEGF, AFP