

ROLE OF SERUM GLYPICAN-3 IN THE DIAGNOSIS AND DIFFERENTIATION OF SMALL HEPATOCELLULAR CARCINOMA FROM HEPATITIS-C VIRUS CIRRHOSIS

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Serum alpha-fetoprotein (AFP) has insufficient sensitivity and specificity

for detection of hepatocellular carcinoma (HCC). Recently, glypican-3 (GLP-3) was suggested as a new biomarker for the detection HCC.

Objectives: To determine the role of serum GLP-3 levels in the early diagnosis and differentiation of small HCC from liver cirrhosis.

Methods: The study included sixty patients; 30 of them with hepatitis C virus (HCV) cirrhosis, and 30 patients with proved HCC. In addition, 20 healthy subjects were included as a control group.

Results: Serum levels of GLP-3 were significantly elevated in patients with HCC compared with HCV cirrhosis group ($p < 0.001$). Also, these levels were significantly elevated in these two patients' groups versus controls ($p < 0.001$). Also, serum GLP-3 levels with cut-off value of $P240 \mu\text{g/L}$, had a higher sensitivity (100%) and same specificity (93.3%), than AFP with cut-off value of $P200 \text{ ng/ml}$, for detection of HCC. Moreover, GLP-3 levels showed a higher sensitivity than AFP (50% vs. 41.7%), for detection of small HCC. The combined use of both markers (i.e. when either one of the two markers positive) improved the specificity to 88.9%. Regarding unicentric HCC, GLP-3 at cut-off value of $6580 \mu\text{g/L}$ had better specificity than AFP at cut-off value of 6765 ng/ml (57.1% vs. 42.9%). The combined use of both markers improved the sensitivity and specificity to 82.6% and 71.4%, respectively.

Conclusion: Serum GLP-3 levels are higher in HCC versus HCV cirrhosis, which can differentiate HCC from liver cirrhosis. Also, serum GLP-3 is highly sensitive and specific for detecting HCC. Moreover, GLP-3 is more sensitive than AFP for the detection of small HCC. Furthermore, a combination of both serum markers yielded an improved specificity and both sensitivity and specificity for the diagnosis of small and unicentric HCC, respectively

Biography

Tarek E. Korah has completed his MD at the age of 37 years from Faculty of Medicine, Menoufiya University, and then he did postdoctoral studies. He was the head of Gastroenterology and Hepatology Unit, in the same University during 2012 till 2015. He has published more than 30 papers in reputed medical journals, has been serving as a reviewer in some of these journals.

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