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Can use Golgi protein 73(GP73), as a serum biomarker for early surveillance of hepatocellular carcinoma in the first stage and chronic liver diseases in Saudi Arabia patients

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Abstract

This study was performed to quantify the expression of Golgi protein-73 (GP73) in healthy controls and in patients with disease, and to judge the correlations between GP73 and other serum markers in numerous liver diseases. Study the sensitivity and specificity of Golgi Glypican-73 (GP37) as new biomarker useful in early prediction for malignant hepatoma in hepatitis viruses (HBV, HCV) and in chronic liver Cirrhosis; Also in chronic liver diseases. Serum GP73 was measured in 478 healthy controls and 296 patients with differing types of disease. Quantitative hepatitis B virus (HBV) DNA made up our minds in two chronic hepatitis B (CHB) groups. Other serum liver fibrosis markers were measured within the liver fibrosis group and ?-fetoprotein (AFP) was measured in hepatoma (HCC) group. The correlations between GP73 and these markers were evaluated. The GP73 value in hepatitis B-e-antigen (HBeAg)-positive CHB group, HBeAg-negative CHB group, liver fibrosis group and HCC group was significantly higher ($p<0.001$) than that in healthy controls. GP73 showed significant correlation with other markers within the liver fibrosis group and with AFP within the HCC group. Compared with healthy controls, GP73 in patients with disease was significantly increased. With the progression of disease, GP73 showed a significantly increasing trend. These results suggest that GP73 may be used as a serum marker for the diagnosis of liver diseases and for monitoring disease progression.

This study was performed to quantify the expression of Golgi protein-73 (GP73) in healthy controls and in patients with disease, and to judge the correlations between GP73 and other serum markers in several liver diseases. Study the sensitivity and specificity of Golgi Glypican-73 (GP37) as new biomarker useful in early prediction for hepatocarcinoma in hepatitis viruses (HBV, HCV) and in chronic liver Cirrhosis; Also in chronic liver diseases. Serum GP73 was measured in 478 healthy controls and 296 patients with differing kinds of disease. Quantitative viral hepatitis virus (HBV) DNA make up my mind in two chronic viral hepatitis (CHB) groups. Other serum liver fibrosis markers were measured in the liver fibrosis group and ?-fetoprotein (AFP) was measured in hepatocellular carcinoma (HCC) group. The correlations between GP73 and these markers were evaluated.

Samples were collected from patients with a case history and continuous follow-up to (ultra sound (US), MRI or CT) the extent of liver cirrhosis and cancer of the liver and exclusion of cases that were met or did not have a medical record . Tumor staging decided using the United Network of Organ Sharing-modified tumor-node-metastasis staging system for HCC. All studied subjects were collected from Pathology Department at King Faisal Specialist Hospital and center (KFSHRC, Riyadh and Jeddah), Pathology Laboratory at Saudi German Hospitals (Riyadh, Jeddah, and Medina), Ministry of home reserve Hospitals, Princess Nourah Oncology Center, Jeddah, Security Forces Hospital Riyadh, soldiers Hospitals (Riyadh, Western, South and Northern), Public and Privet Hospitals in several regions in Asian nation from July 2014 to May 2017. Subjects with HCC on biopsy, a replacement hepatic defect, showed vascular enhancement on one imaging modality (US, MRI, or CT) with AFP >1,000 ng/mL. For the cirrhosis group, patients with hepatitis C and serum hepatitis and biopsy-proven cirrhosis were enrolled. All controls healthy group were screened for hepatitis viruses before enrollment.

In the current study, tests were conducted on 300 blood samples, 250 blood samples of hepatoma (HCC), chronic liver cirrhosis (CLC) and 50 blood samples of healthy control normal group. an entire blood samples were 250; 185 (74%) males and 65 (26%) females with an age range from 23 to 78 years. The control group included 50 healthy subjects (blood donors 16 males and 4 females) with an age range between 22 and 60 years. Demographic and clinical information were obtained and a 20-ml blood sample was collected from each subject during a serum separator tube and spun within 2 h, and Centrifuged serum was stored at −20°C for GP-73 protein and AFP assay.

The study was conducted after approval from the committee of Institute Review Board (IRB), King Khalid University Hospital, King Saud university, College of medicine, (14/4180/IRB). All written approvals were taken from patients before starting the study. Regarding prognostic signatures for HCC, the phenotypic and molecular diversity of HCC allows us to spot several new biomarkers. Changes in AFP levels are used for prognostic stratification at a cut-off of > 500 ng/dL

as a predictor of drop-out within the list of transplantation and as a predictor of the end result of patients in phase III trials testing systemic therapies like transarterial therapies or Sorafenib. Furthermore, a superb prognostic ability has also been reported for a few genetic signatures obtained from tumor specimens in HCC patients treated by liver resection. multiple cohorts

Indeed, a 5-gene score supported the expression of TAF9, RAN, RAMP3, KRT19 and HN1 genes, represents the foremost reliable predictor of survival identified to date in mult Also, neoangiogenesis-related genes (a panel of microRNA related to regulation of angiogenesis) seem to be hallmarks of fast-growing HCCs and worst survival. Finally, a 186-gene score from adjacent to tumor tissue was shown to own independent prognostic significance to predict overall survival in HCC patients.

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