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Autoantibodies as diagnostic tools in the sera of patients with hepatocellular carcinoma

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Background: Hepatocellular carcinoma (HCC) is a tumor in which the cancer starts during adulthood in hepatocytes. Due to the lack of early diagnosis, the incidence of HCC is rising and the provision of effective therapy to the patients suffering from HCC is impossible. A number of HCC tumor markers have been identified, but there is no evidence which indicates the significance of clinical diagnosis of HCC by the detection of these markers. The aim of our study is to identify new immunological tumor markers for the diagnosis of HCC.

Methods: In present study, we analyzed sera (n=33) from patients with HCC of different etiologies. Hepatitis C virus infection (n=8), hepatitis B virus infection (n=3), alcoholic (n=12) cryptogenic (n=10) and sera from healthy subjects (n=15). Sera were tested on immunoblots performed with nuclear, mitochondrial, microsomal and cytosolic proteins. SDS-PAGE resolved gels obtained from rat liver homogenate.

Results: Several bands were stained by patient's sera and controls. But promising autoantibodies (AAb) were seen on immunoblots performed both with microsomal and cytosolic fractions. AAb showing double band of 54 kDa and 38 kDa microsomal proteins were found with 7 (21%) and 3 HCC sera (9%), respectively. With cytosol as antigen, a 72 kDa band reacted with 8 HCC sera (24%), and a 54 kDa band with 10 HCC sera (30%). These AAbs were not detected in the sera from healthy subjects.

Conclusion: We concluded that these protein specific antibodies in HCC may be the future candidates for HCC biomarkers and must be identified.

Biography

Mohammad Zahid is currently working as an associate professor in the University of Balochistan, Pakistan in collaboration with the INSERM, France. He has published research paper in various journals and his main areas of research interests are Liver and associated diseases that are liver cancer and hepatocellular carcinoma.

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