

3rd Annual Congress on

INFECTIOUS DISEASES

August 21-23, 2017 San Francisco, USA

Mitochondrial DNA copy number in AU1 c Egyptian patients with hepatitis C virus-related hepatocellular carcinoma

Doaa I Hashad, Amany S Elyamany and Perihan E Salem
Alexandria University, Egypt

Aim: To assess the use of mitochondrial DNA (mtDNA) content as a noninvasive molecular biomarker in hepatitis C virus-related hepatocellular carcinoma (HCV-HCC).

Materials & Methods: A total of 135 participants were enrolled in the study. Equal numbers of subjects were enrolled in each of three clinically defined groups: Those with HCV-related cirrhosis (HCV-cirrhosis), those with HCV-HCC, and a control group of age and sex-matched healthy volunteers with no evidence of liver disease. mtDNA concentrations were determined using a quantitative real-time polymerase chain reaction (PCR) technique.

Results: mtDNA content was lowest among the HCV-HCC cases. No statistically significant difference was observed between the group of HCV cirrhosis and the control group as regards mtDNA level. HCC patients with multicentric hepatic lesions had significantly lower mtDNA content than HCC patients with less advanced disease. When a receiver operating characteristic curve analysis was used, a cutoff of 34 was assigned for mtDNA content to distinguish between HCV-HCC and HCV-cirrhosis patients who are not yet complicated by malignancy. Lower mtDNA content was associated with HCC risk when using either or both healthy controls and HCV-cirrhosis groups for reference.

Conclusions: mtDNA content analysis could serve as a noninvasive molecular biomarker that reflects tumor burden in HCV-HCC cases and could be used as a predictor of HCC risk in patients of HCV-cirrhosis. In addition, the non-significant difference of mtDNA level between HCV-cirrhosis patients and healthy controls could eliminate the gray zone created by the use of alpha-fetoprotein in some cirrhotic patients.

Biography

Doaa I Hashad has completed her Master's in 2001 and then her MD in 2007 from Alexandria University. She is an Associate Professor at the Clinical Pathology Department, Faculty of Medicine, Alexandria University. She has published many papers in reputed high ranked journals. She is Editor of two online books: *Cancer Management* and *Gene Therapy: Principles and Challenges*. She is the Technical Manager of Molecular Diagnostic Laboratory at the Faculty of Medicine, Alexandria University.

doaa_hashad2003@yahoo.com

Notes: