Tissues, Pathology, and Diagnostic Microscopy

LS.2.P083
Hepatic Fibrogenic Cells in HCV Infected Patients: An Ultrastructural and Immunological Study

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Deeper and further study of the three main cells involved in hepatic fibrogenesis: hepatic stellate cell, myofibroplast and fibroblast cells may be a step forward to identify the cell which has the main impact on the process of hepatic fibrogenesis and this can be step toward hampering its action. The present work deals with the morphological and quantitative assessment and distribution of these three cells at an ultrastructural and immunological determination levels in relation to the stages of hepatic fibrosis in a group of infected patients with HCV.

54 cases positive for serum HCV RNA and not suffering from any additional cause of chronic liver diseases were enrolled in this study. Liver biopsies were collected from those patients according to Helsinki rules. Tiny liver pieces were fixed for electron microscopic (EM) examination. Paraffin embedded liver tissues were processed for morphometric image analysis and staging of liver fibrosis. Also, multiple color immunofluorescent labeling of the three studied cells was done and examined using confocal laser scanning microscopy (CLSM).

Significant correlation was detected between the values of the morphometric image analysis of liver fibrosis and the METAVIR scoring of the stage of hepatic fibrosis of the examined cases ($P<0.05$). This equally correlated with the mean value of the recorded number of myofibroblast and stellate cells ($P<0.05$; $P<0.05$). circulating bone marrow fibrocyts were depicted in the portal vein of some sections of stage 3 fibrosis. The three fibrogenic cells work in a synergistic manner in which myofibroblasts constitute the main cellular component involved in fibrogenesis.