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The changes of cytokines levels in progression of liver fibrosis caused by HDV-infection

Background & Aim: Cirrhosis in the outcome of Chronic Hepatitis D (CHD) is the most common cause of liver transplantation in Kazakhstan. The CHD is an immune-mediated disease. The aim of the study was to determine the role of cytokines in the progression of liver fibrosis in chronic hepatitis D.

Method: A total of 105 patients with CHD and cirrhosis caused by HDV-infection were examined. We used ELISA tests and FibroScan 502.

Results: The results showed the level of cytokines increase of TNF- α ($P=0.009$), IL-10 ($P=0.002$), depending on the stage of fibrosis. TNF- α has a positive correlation with ALT ($r=0.358$, $P<0.0001$), AST ($r=0.452$, $P<0.0001$) and negative with creatinine ($r=-0.396$, $P=0.002$), urea ($r=-0.280$, $P=0.019$), platelets ($r=-0.290$, $P=0.005$) and leukocytes ($r=-0.342$, $P=0.001$). IL-10 has a positive correlation with ALT ($r=0.256$, $P=0.004$), AST ($r=0.380$, $P<0.0001$), bilirubin ($r=0.194$, $P=0.037$) and negative with albumin ($r=-0.586$, $P=0.005$), creatinine ($r=-0.389$, $P=0.003$), urea ($r=-0.267$, $P=0.026$), platelets ($r=-0.379$, $P<0.0001$) and leukocytes ($r=-0.382$, $P<0.0001$). IL-17 has negative relationship with ALT and AST ($r=-0.209$, $P=0.021$ and $r=-0.249$, $P=0.006$). TGF β 1 has a positive relationship with ALT ($r=0.263$, $P=0.014$), AST ($r=0.263$, $P=0.004$), albumin ($r=0.600$, $P=0.004$), total protein ($r=0.296$, $P=0.027$), TNF- α ($r=0.897$, $P<0.0001$), IL-10 ($r=0.665$, $P<0.0001$) and negative with IL-17 ($r=-0.677$, $P<0.0001$) and creatinine ($r=-0.354$, $P=0.014$).

Conclusion: CHD progression is associated with the activity of the TNF- α and IL-10, which have a negative relationship with IL-17 and positive with TGF β 1. The initiation of autoimmune inflammation occurs in the early stages fibrosis and in cirrhosis decrease of autoimmune inflammation occurs.

Biography

Bibigul Ilyassova has completed her PhD from Kazakh National Medical University, Kazakhstan. She is the Senior Researcher and Associate Professor of the Syzganov National Scientific Center of Surgery. She has published more than 15 papers in reputed journals.

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