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Establishment of hepatitis model in rat liver induced by injecting extracted DNA: Histopathological study

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Chronic inflammatory liver diseases can be induced by viral infections, toxic-metabolic factors and/or autoimmune mechanisms. Inflammation or viral infection results in hepatocyte damage or cell lyses which cause DNA or other cell nuclear materials to be released by hepatocytes to serve as auto-antigens that participate in auto-immune hepatitis. Those released cellular materials will be exposed to the immune system before phagocytosis by Kupffer cells. In this study, injecting rats with extracted DNA combined with CFA resulted in hepatitis cellular symptoms. Plasma globulin was increased and liver function enzymes were higher in plasma and lower in liver tissues compared to CFA and control groups. The inflammation was indicated histologically by the presence of active Kupffer cells, it led to irregularly shaped hepatic lobule, pyknotic cells, vacuolated nucleus and infiltration of liver parenchyma with lymphocytes. Vacuolation of the cells with fatty degeneration and necrotic hepatocytes also, was recorded. It is clear that using cell nuclear materials can induce inflammation that has some hepatitis identity.

Biography

Ahmed S Ibraheem has obtained his PhD from Virginia Common Wealth University in 2004 and then moved to Sohag University Egypt. Later, he temporarily started working at Hail University, KSA. The field of specialization for him is Immunology with special focus on Autoimmunity.

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