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Alcoholic liver disease and Drug induced liver disease

HISTOLOGIC FINDINGS IN LIVER BIOPSY OF ALCOHOLIC CIRRHOSIS PATIENTS AFTER HEMATOPOIETIC STEM CELL TRANSPLANTATION

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Background and Aims: So far there is no effective antifibrotic treatment in alcoholic liver cirrhosis (ALC). One of the novel treatment options is using of autologous hematopoietic stem cells (HSC). Sinusoids capilliarization and myofibroblasts activation are key events in liver fibrogenesis. The purpose of the study was evaluation of the effect of HSC autotransplantation on these processes in patients with alcoholic cirrhosis.

Methods: The study was performed on liver biopsies of 12 patients with ALC taken before the injection of autologous peripheral blood HSCs mobilized by GCSF into celiac trunk, 3 and 12 months after the procedure. Biopsies were stained immunohistochemically with antibodies against CD34 and a-SMA. CD34 is absent in endothelial cells of normal liver however it appears in case of their capillarization. A-SMA is a marker of myofibroblasts.

Results: Before transplantation we observed the great number of CD34-positive cells predominantly in portal areas as well as some positive cells in septa and in parenchyma. A-SMA-positive myofibroblasts were mainly localized in periportal zones and portal tract infiltration areas. 3 months after transplantation the number of CD34-positive cells and myofibroblasts markedly decreased; remaining cells were located mainly around portal tracts. 12 months after transplantation the number of CD34 and a-SMA-positive cells increased again but didn't reach initial levels. The number of cells correlated with the severity of infiltration.

Conclusions: We suggest that transplantation of HSCs in patients with ALC is safe and effective procedure leading to decreasing of myofibroblasts number and restoring of normal sinusoids' structure. However this procedure should be probably repeated in a year.

Disclosure of Interest: None Declared