

$P < 0.01$ ;  $36.10\% \pm 20.65\%$ ,  $P < 0.01$ ;  $28.99\% \pm 10.59\%$ ,  $P < 0.01$ ) and in healthy control group ( $2.64\% \pm 0.42\%$ ,  $P < 0.01$ ;  $19.67\% \pm 9.09\%$ ,  $P < 0.01$ ;  $24.52\% \pm 7.52\%$ ,  $P < 0.01$ ). The frequencies of CD39<sup>+</sup>treg cells in peripheral blood in HBV-related ACLF interim group ( $53.83\% \pm 26.62\%$ ,  $P < 0.05$ ) and late group ( $52.88\% \pm 23.24\%$ ,  $P < 0.05$ ) were higher than those in early group ( $25.44\% \pm 8.73\%$ ). Eventually, 27 patients completed the dynamic observation in this short-term follow-up, in improved group, MELD score showed a gradually decreasing trend, the frequencies of treg cells showed a gradually rising trend. But in deteriorated group, MELD score showed a gradually rising trend, the frequencies of treg cells showed a shortly rising and gradually decreasing trend. In improved group and deteriorated group, the frequencies of CD39<sup>+</sup>treg cells and CTLA-4<sup>+</sup>treg cells in peripheral blood were not show significant fluctuations.

**Conclusion:** HBV-related ACLF patients suffered from an immune imbalance, the expression and dynamic changes the frequencies of treg cells in peripheral blood can be used as additional tools in disease progression of clinical observation and short-term prognosis prediction in those patients.

#### OL-081 Vascular obstruction contributes to progression of hepatic cirrhosis in patients with chronic HBV

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**Objective:** To investigate the relationship between Vascular obstruction and progression of hepatic cirrhosis in patients with chronic HBV.

**Study design:** 310 patients from 123<sup>rd</sup> hospital of PLA with HBV-related cirrhosis received liver biopsy follow-up were included in this study. HE and immunohistochemical staining were used to examine the changed in liver pathology. The scores of hepatic fibrosis grading were determined blindly by two independent pathologists.

**Results:** HE and Immunohistochemical staining demonstrated that patients with high hepatic fibrosis scores showed intrahepatic vascular obstruction, more fibrous tissue and a stronger protein expression of VEGF in endothelial cells compared with patients with low hepatic fibrosis scores. After intrahepatic injections with Hepatocyte Growth Factor (HGF), vascular obstruction was markedly ameliorated and collagen fibers and expression of VEGF in liver tissue was significantly reduced showed by follow-up liver biopsies compared with the initial liver biopsy.

**Conclusions:** Our data showed that vascular obstruction contributes to progression of hepatic cirrhosis in patients with chronic HBV. This study provided us a new therapeutic approach to HBV-related liver cirrhosis.

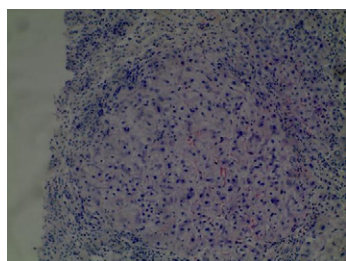


Figure 1. Patients with liver cirrhosis (G4S4, HE × 100).

#### OL-082 Effect of SiRNA-mediated Smad3 silence on proliferation and apoptosis in activated hepatic stellate cells

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**Objectives:** To investigate the effects of SiRNA mediated Smad3 silence on proliferation, apoptosis in activated hepatic stellate cells and the mechanisms involved.

**Methods:** HSC-T6 cells were divided into three groups: blank group, negative control group, SiRNA-Smad3 transfection group. The siRNA-Smad3 was transfected into HSC-T6 cells. After transfecting with different time, cell proliferation was measured by CCK-8, cell apoptosis was detected by flow cytometry, p53 and bcl-2 protein expression was detected by immunocytochemistry.

**Results:** (1) After 24h, 48h, 72h of transfection, HSC proliferation was significantly inhibited and apoptosis increased significantly in the transfection group compared with the blank and negative control group ( $P < 0.01$ ). (2) After 48h of transfection, the expression of p53 protein was increased significantly and bcl-2 protein was significantly decreased in the transfection group compared with the blank and negative control group ( $P < 0.01$ ).

**Conclusion:** The Smad3-SiRNA mediated Smad3 silence can significantly inhibit HSC proliferation and induce apoptosis, Smad3 silence inducing HSC apoptosis may be associated with up-regulating expression of p53 and down-regulating expression of bcl-2 on HSC. For the treatment of liver fibrosis, Smad3 silence may provide a new pathway.

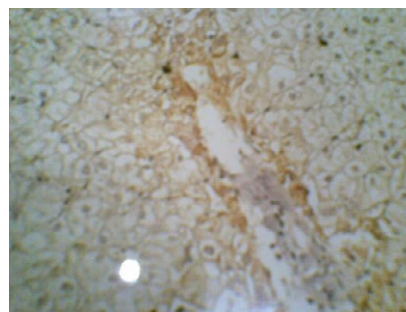


Figure 1. Intrahepatic vascular obstruction in liver tissue (HE × 100).

#### OL-083 Autologous bone mesenchymal stem cell transplantation in liver failure patients caused by hepatitis B: 48-week observations of therapeutic effects

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**Objectives:** To investigate the therapeutic effects on liver failure patients caused by hepatitis B at 48 weeks after autologous MMSCs transplantation.

**Methods:** 53 patients (group A) underwent autologous marrow mesenchymal stem cells (MMSCs) transplantation and 105 patients with matched age, gender and biochemical indexes, including alanine aminotransferase (ALT), albumin, total bilirubin (TBIL), prothrombin time (PT), and Model for End-Stage Liver Disease (MELD), comprised the group B who received medical treatments only. 120 ml of bone marrow from patients were obtained and MMSC cell suspension were separated and slowly transfused into the liver through the proper hepatic artery. The side effects and complications were observed. The manifestations of ultrasound and levels of biochemical indexes were compared through 48 weeks.