Liver Research Directory

Clinical pathological study of treatment of chronic hepatitis with hyperbaric oxygenation


Department of Gastroenterology, The Affiliated Nanjing Second Hospital of the Medical College of Nanjing Southeast University, Nanjing 210003, China. liuwei6501@sohu.com

OBJECTIVE: To detect the feasibility and theoretic basis for treatment with hyperbaric oxygenation (HBO) in chronic hepatitis and to compare the changes in hepatic function, immunity, pathologic morphology, ultrastructure and HBV in hepatic tissues before and after treatment. METHODS: Sixty cases of chronic hepatitis were randomly selected and divided into two groups: the experiment (n = 30) and control groups (n = 30). Patients in the experimental group were treated with HBO for 6 courses. Patients in the control group were treated for 60 days with the usual drugs used in the clinic. The function and bloodstream graph of liver were examined and liver biopsies were made before and after treatments. Routine paraffin sections were stained with HE and observed under the light microscope. Ultra thin slides from paraformaldehyde and glutaraldehyde fixed liver tissue were stained with lead citrate and observed with the transmission electric microscope. HBsAg and HbcAg in liver of the experimental group were detected with ABC immunohistochemistry method before and after treatment.

RESULTS: For the experimental group, ALT, SB, gamma-GT, AKP, IgG, and IgM in blood and the degeneration and necrosis of hepatocytes were remarkably decreased (P < 0.05), the mean contractive wave of bloodstream in liver and the bloodstream in right ramus of janitrix were remarkably increased (P < 0.05), and the swelling of mitochondria, increase of lysosomes, generation of Kupffer cells, infiltration of lymphocytes in portal area and capillary generation were all remarkably all eviated (P < 0.05) after treatment with HBO. There were significant differences between the experimental and control groups after treatment with different methods (P < 0.05). For patients in the experimental group, the fibrosis and fat-storing cells in the liver were not reduced (P > 0.05), and the expression of HBsAg and HbcAg in liver was not weakened (P < 0.05) after treatment.

CONCLUSIONS: Treatment with HBO for chronic hepatitis was effective and recommendable, but it could not reverse liver fibrosis. However, it might be able to delay or prevent the liver from fibrosis, so it might be more effective at the early and middle stages of chronic hepatitis. HBO could not inhibit the HB virus. So we consider that treatment with HBO should be simultaneous with anti HBV therapy.


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