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Effect of hydrogen-rich water on oxidative stress, liver function, and viral load in patients with chronic hepatitis B

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Abstract

Objective: To investigate effects of hydrogen-rich water (HRW) on oxidative stress, liver function and HBV DNA in patients with chronic hepatitis B (CHB).

Methods: Sixty patients with CHB were randomly assigned into routine treatment group or hydrogen treatment group in which patients received routine treatment alone or additional oral HRW (1200-1800 mL/day, twice daily), respectively, for 6 consecutive weeks. Serum oxidative stress, liver function, and HBV DNA level were detected before and after treatment. Thirty healthy subjects served as controls.

Results: When compared with controls, oxidative stress was obvious in CHB patients, and the liver function also significantly impaired. After treatment, the oxidative stress remained unchanged in routine treatment group, but markedly improved in hydrogen treatment group. The liver function was improved significantly and the HBV DNA reduced markedly after corresponding treatments. Although a significant difference was noted in the oxidative stress between two groups after treatment, the liver function and HBV DNA level were comparable after treatment and both had improved tendencies.

Conclusion: HRW significantly attenuates oxidative stress in CHB patients, but further study with long-term treatment is required to confirm the effect of HRW on liver function and HBV DNA level.

Keywords: chronic hepatitis B; hydrogen-rich water; liver function; oxidative stress; viral load.

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Figures

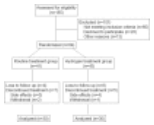

Figure 1 Flow chart of patients' recruitment.

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