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Protective effect of hydrogen-rich water on liver function of colorectal cancer patients treated with mFOLFOX6 chemotherapy

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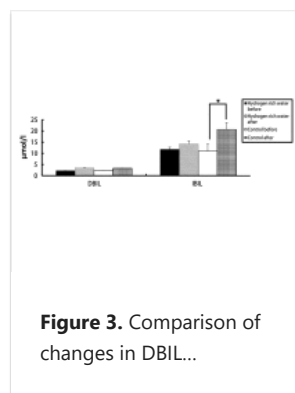
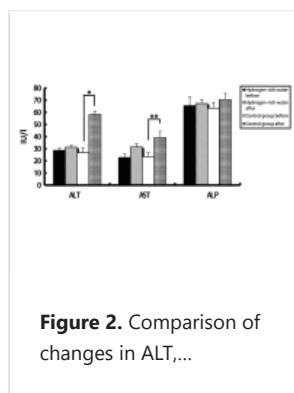
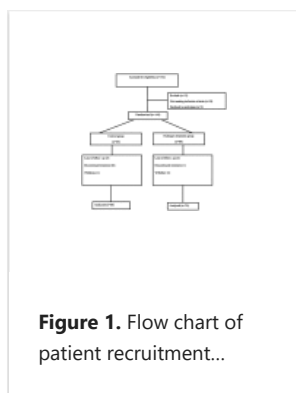
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Abstract

The present study was conducted to investigate the protective effect of hydrogen-rich water on the liver function of colorectal cancer (CRC) patients treated with mFOLFOX6 chemotherapy. A controlled, randomized, single-blind clinical trial was designed. A total of 152 patients with CRC were recruited by the Department of Oncology of Taishan Hospital (Taian, China) between June 2010 and February 2016, among whom 146 met the inclusion criteria. Subsequently, 144 patients were randomized into the treatment (n=80) and placebo (n=64) groups. At the end of the study, 76 patients in the hydrogen treatment group and 60 patients in the placebo group were included in the final analysis. The changes in liver function after the chemotherapy, such as altered levels of alanine aminotransferase (ALT), aspartate transaminase (AST), alkaline phosphatase, indirect bilirubin (IBIL) and direct bilirubin, were observed. The damaging effects of the mFOLFOX6 chemotherapy on liver function were mainly represented by increased ALT, AST and IBIL levels. The hydrogen-rich water group exhibited no significant differences in liver function before and after treatment, whereas the placebo group exhibited significantly elevated levels of ALT, AST and IBIL. Thus, hydrogen-rich water appeared to alleviate the mFOLFOX6-related liver injury.

Keywords: chemotherapy; colorectal cancer; hydrogen-rich water; liver damage; mFOLFOX6.

Figures



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