

Effect of hyperbaric oxygen on patients with traumatic brain injury

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摘要

Abstract

Hyperbaric oxygen therapy (HBOT) is the medical therapeutic use of oxygen at a higher atmospheric pressure. The United States Food and Drug Administration have approved several clinical applications for HBOT, but HBOT in traumatic brain injury (TBI) patients has still remained in controversial. The purpose of our study is to evaluate the benefit of HBOT on the prognosis of subacute TBI patients. We prospectively enrolled 44 patients with TBI from November 1, 2004 to October 31, 2005. The study group randomly included 22 patients who received HBOT after the patients' condition stabilization, and the other 22 corresponding condition patients were assigned into the matched control group who were not treated with HBOT. The clinical conditions of the patients were evaluated with the Glasgow Coma Scale (GCS) and Glasgow Outcome Scale (GOS) before and 3 to 6 months after HBOT. The GCS of the HBOT group was improved from 11.1 to 13.5 in average, and from 10.4 to 11.5 ($p < 0.05$) for control group. Among those patients with GOS = 4 before the HBOT, significant GOS improvement was observed in the HBOT group 6 months after HBOT. Based on this study, HBOT can provide some benefits for the subacute TBI patients with minimal adverse side effects