

Traumatic Brain Injury

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Cerebral perfusion SPECT imaging for assessment of the effect of hyperbaric oxygen therapy on patients with postbrain injury neural status.

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OBJECTIVE: To evaluate the effects of hyperbaric oxygen (HBO) therapy on patients with postbrain injury neural status. **METHODS:** Two to 4 courses of HBO therapy and/or medications were used to treat 320 patients who were randomly divided into two groups. Assessment was made with (99m)Tc-ethyl cysteinate dimer ((99m)Tc-ECD) single photon emission computed tomography (SPECT) before and after treatment. **RESULTS:** There was a significant difference between the HBO therapy group and the non-HBO therapy group. HBO therapy was superior to medication treatment alone in the recovery of clinical symptoms, control of epilepsy, and resolution of hydrocephalus ($P<0.01$). **CONCLUSIONS:** HBO therapy has specific curative effects on patients with postbrain injury neural status, and (99m)Tc-ECD SPECT could play an important role in diagnosing postbrain injury neural status and monitoring the therapeutic effects of HBO.

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