



## **Clinical function scores and motor evoked potentials of patients with acute cerebral infarction before and after major ozonated autohemotherapy: A control study**

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### **Abstract**

**Objective:** To explore the effect of major ozonated autohemotherapy (MOAH) on the clinical motor function recovery of patients with acute cerebral infarction (ACI) according to U.S. National Institutes of Health Stroke Score (NIHSS), Modified Rankin Scale (mRS), transcranial magnetic stimulation motor evoked potential (MEP). **Methods:** Eighty-six patients with ACI were randomized into two equal groups (n=43). All the patients in the two groups were administered of 450mg XueShuantong injection (a kind of traditional Chinese patent medicine, The main component is arasaponin.) and 0.1g Aspirin, or 50–75mg Clopidogrel bisulfate tablets, once every night. Meanwhile, in ozone group, the patients were treated with MOAH, once a day and (  $10 \pm 3$  ) days as a course. Recovery of neurological function was evaluated by NIHSS, mRS Index, MEP through transcranial magnetic motor stimulation. **Results:** Before treatment, the NIHSS, mRS index and the cortical potential amplitude of MEP extraction rate, CMCT and amplitude had no significant difference between the two groups ( $P > 0.05$ ), but after treatment, all were significantly different from that before the treatments ( $P < 0.05$ ). The total effective rate in ozone group was higher than that in control group ( $P < 0.05$ ). The cortical potential raised rate ( 70.7% ) of upper limbs in ozone group was higher than that in control group (68.3%) ( $P < 0.05$ ), but the MEP amplitudes of both upper and lower limbs were not higher than that in control group ( $P > 0.05$ ). The CMCT of upper limbs in experimental group ( $8.0 \pm 2.44$ )ms shortened obviously than that in control group (  $9.1 \pm 2.77$  ) ms ( $P < 0.05$ ). The MEP amplitudes of upper limbs [3.30(0.75,4.79)] mv in experimental group was significantly higher than upper MEP amplitude in the control group [2.40 (0.64,4.09)] mv ( $P < 0.05$ ). NIHSS was positive to CMCT ( $r = 0.782$ ) ( $P < 0.05$ ) and MEP amplitudes of the upper limbs ( $r = 0.847$ ) ( $P < 0.05$ ). **Conclusion:** MOAH has certain positive effect on the recovery of motor function of patients with ACI, and the MEP index including CMCT and amplitude of upper limbs could efficiently evaluate the motor function.

**Key words:** Major Ozonated Autohemotherapy, Acute Cerebral Infarction, Motion Evoked Potential, NIHSS, mRS

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