

The Effects of Treatment of Pulmonary Damage in Acute Paraquat Poisoning with High Dose Ambroxol Hydrochloride

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Abstract

Objectives: To observe the effects of treatment of pulmonary damage in acute paraquat poisoning with high dose ambroxol hydrochloride.

Methods: Forty patients of acute paraquat poisoning with pulmonary damage were randomly divided into 2 groups: control group (n=20) and treatment group (n=20). The control group received conventional therapy, and the treatment group underwent intravenous infusion of ambroxol hydrochloride 20 mg/kg/d q12 h for 5 days in addition to the routine treatment. The artery blood gas, HRCT film changes, number of cases with multiple organ dysfunction syndrome (MODS), mortality, and survival time of the death cases were observed. Serum MDA, SOD and TNF- α , IL-6 levels were measured in 2 groups before and 5 days after therapy.

Results : After treatment the oxygen partial pressure, oxygenation index, and HRCT film changes were all improved in these 2 groups ($p < 0.01$ or $p < 0.05$), especially in the treatment group compared with the control group ($p < 0.05$). The number of MODS case in the treatment group were lower than those in the control group ($p < 0.05$), but mortality of the treatment group were not significantly different from those of the control group. After treatment plasma level of MDA($\mu\text{mol/L}$) were all decreased in these 2 groups, especially in the treatment group compared with the control group ($p < 0.05$); plasma level of SOD(Ku/L) were all risen in these 2 groups, especially in the treatment group compared with the control group ($p < 0.05$). After treatment plasma level of TNF- α , IL-6 (ng/L) were all decreased in these 2 groups, especially in the treatment group compared with the control group ($p < 0.05$).

Conclusions: High dose ambroxol can be adopted to improve the ability of anti-oxidation of the organism, inhibit lipid peroxidation and the levels of proinflammatory factor, lessen pulmonary damage, thus it has a certain therapeutic effect for treatment of acute paraquat poisoning.