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A Study on Protective Effects of Xuebijing on Multiple Organs for Patients with Acute Paraquat Poisoning

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Abstract

Objectives: To investigate the protective effective of Xuebijing injection on multiple organs for patients with acute paraquat poisoning.

Methods: 40 patients with paraquat poisoning admitted in January 2008 to December 2012 were randomly divided into treatment groups: 21 patients and control group (19 patients）. The control group received conventional therapy, and the treatment group, besides therapy, was additionally treated by Xuebijing 50 ml intravenous drip, twice per day for a week. Levels of arterial oxygen saturation (SaO_2), malondialdehyde (MDA) and superoxide dismutase (SOD) in plasma, changes of biochemical indexes of multiple organs injury and mortality in the two groups were detected.

Results: After 3days of treatment, SaO_2 in the treatment group was higher than that in the control group (0.86±0.08 vs. 0.75±0.06, *P*<0.05), and the trend of increase was even more obvious after 7、14、21 days of treatment (7day: 0.75±0.09 vs. 0.55±0.03, 14day: 0.67±0.12 vs. 0.49±0.02, 21day: 0.63±0.14 vs. 0.35±0.04, all *P*<0.01). The plasma level of MDA (umol/L) in treatment group was lower than that in control group after 3 、7 days of treatment (3day: 6.3±1.1 vs. 7.9±1.3, 7day: 5.7±0.9 vs. 6.7±1.2, both *P*<0.05). The plasma level of SOD (kU/L) in treatment group was higher than that in control group after 3、7 and 14 days (3day: 122.5±8.4 vs. 105.3±8.3, 7day: 131.3±9.4 vs. 109.7±8.5, 14day: 138.4±8.3vs. 119.3±8.4, *P*<0.05 or *P*< 0.01). In the treatment group, the mortality rate was lower than that of control group (45.6% vs. 71.3%, *P*<0.05), and the number of visceral damage and the degree of damage were lower than in the control group, the differences between the two groups being statistically significant (*P*<0.05 or *P*<0.01).

Conclusions: Xuebijing injection can be adopted to elevate the ability of anti-oxidation of the organism, inhibit lipid peroxidation and lessen the occurrence of organ functional failure; hence it has a certain therapeutic effect for treatment of acute paraquat poisoning.