Therapeutic effects of alprostadil on chronic right heart failure

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[Foundation Project]: The study was supported by the Scientific and Technological Project of Iron and Steel Group of Hebei Province with the number of 2010060304.

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Received: 2014-11-27 Revised: 2014-12-12

JHMC. 2015; 21(3): 326-328

View from specialist: It is creative, and of certain scientific and educational value.

[ABSTRACT] Objective: To explore the therapeutic effects of alprostadil on chronic right heart failure (CRHF) and its mechanism of action. Methods: A total of 120 CRHF patients were enrolled in our study and randomized into the observation group and the control group with 60 cases in each group. The patients in the two groups were given CRHF conventional treatments on admission, including small dosage of cardiac stimulants, application of diuretics, improvement of ventilation, eliminating phlegm, adoption of bronchial diastolic agents and continued low flow oxygen inhalation. Based on the conventional treatments, the patients in the observation group were given additional intravenous drip of alprostadil (20 μg) and normal saline (100 mL), once every day and two week as one course. The changes of BNP, RVEF, and PASP in the two groups before treatment and one course after treatment were observed, and the various indicators of hemorheology in the two groups before and after treatment were compared. Results: There was no significant difference in BNP, RVEF, and PASP before treatment between the two groups ($P>0.05$). The BNP and PASP in the two groups after treatment were significantly reduced when compared with those before treatment, while RVEF was significantly increased as compared with that before treatment ($P<0.05$). The improvements of this three indicators after treatment in the observation were significantly superior to those in the control group ($P<0.05$). The MPAP, plasma viscosity, whole blood viscosity, haematocrit, and fibrinogen after treatment in the observation were significantly lower than those in the control group ($P<0.05$). Conclusions: On the basis of conventional treatments, additional adding of alprostadil can effectively enhance RVEF, and reduce BNP, PASP, and blood viscosity, so that the patients' cardiac functions can be improved with an obvious efficacy.

[KEY WORDS] CRHF, alprostadil, RVEF, BNP, PASP