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CLINICAL STUDY OF RECOMBINANT HUMAN BRAIN NATRIURETIC PEPTIDE IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION COMPLICATING CONGESTIVE HEART FAILUREZhangqiang Chen, Lang Hong, Hong Wang, Qiulin Yin *Jiangxi Provincial People and Hospital*

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Objective To observe the efficacy and safety of recombinant human brain natriuretic peptide (rh-BNP) on patients with acute myocardial infarction complicating congestive heart failure.

Methods Forty patients with acute myocardial infarction complication by congestive heart failure were randomly divided into control group and treatment group of 20 cases. Among the control group, 15 cases of acute anterior myocardial infarction, five cases of acute inferior wall myocardial infarction, 15 males and five females, aged 55–70 years, mean age 58 ± 12 years; treated 16 cases of acute anterior myocardial infarction, four cases of acute myocardial infarction, 16 males and four females, aged 56–70 years, mean age 59 ± 11 years; Two groups of age, gender, severity of disease and vascular lesions no significant difference and comparable ($p > 0.05$). Conventional group were given aspirin, clopidogrel, statins, isotropic, diuretic and vasodilator therapy. In the conventional treatment group based on the use of recombinant human brain natriuretic peptide (new bios, Tibet Pharmaceutical Co., Ltd. Chengdu Nuodikang biopharmaceutical production, usage: 1.5 $\mu\text{g}/\text{Kg}$ intravenous injection (impact), then 0.0075 μg –0.01 $\mu\text{g}/(\text{kg min})$ infusion rate) continuous medication for 72 h. The clinical symptoms observed for 3 days in patients before treatment and after treatment, heart rate, blood pressure and left ventricular ejection fraction (LVEF) and tumour necrosis factor (TNF α), brain natriuretic peptide (BNP) levels were measured.

Results In control group, eight cases show noticeable effect, five cases some effect and seven cases no effect, the total effective rate was 65%; In treatment group, 13 cases show noticeable effect, six cases some effect and one case no effect, the total effective rate was 95%; Comparing the two

groups $p < 0.05$. These parameters were significantly different ($p < 0.05$) before and after treatment. New bios treatment group significantly increased cardiac index (CI) in patients with heart failure and left ventricular ejection fraction (LVEF) than the control group (all $p < 0.05$). Further reduce in the levels of tumour necrosis (TNF α) and brain natriuretic peptide (BNP) (all $p < 0.05$), liver and kidney function as well as electrolytes were no significant difference between the two groups ($p > 0.05$).

Conclusion rh-BNP can improve symptoms and heart function, reduced plasma tumour necrosis factor (TNF α) and BNP levels of acute myocardial infarction patients with congestive heart failure, the treatment is safe and reliable. As only a small sample size is currently observed, a much larger sample to be accumulated to further evaluate its efficacy and safety.