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**EFFECT OF BENAZEPRIL AND METOROLOL ON
NEUROENDOCRINE HORMONES IN CONGESTIVE
HEART FAILURE**Huang-Ying, Zhang-Dai Fu *The Shanghai Pu Dong Xin Qv People Hospital*

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Background PRA, AgII, ET, BNP are involved in nerve cell development and progression of chronic heart failure, CHF
Objects: To observe the effects of angiotensin inhibitor benazepril hydrochloride and β -blocker metoprolol tartrate on the neuroendocrine hormonal status in congestive heart failure CHF).

Methods 120 hospitalised CHF patients were randomly divided into A, B, C (three groups of 40 cases). A group (conventional treatment group) had routine treatment including: oxygen, low-salt diet, rest, cardiac, diuretic and vasodilator; B group (benazepril group) had benazepril combined with the conventional therapy, (Benazepril hydrochloride Plymouth (Lotensin), dose-long 1 times/day); C group (combined treatment group) were given metoprolol, benazepril and conventional therapy. Metoprolol tartrate was started at 6.25–25 mg 2 times/day, and gradually titrated every 2 weeks up to 25 mg 2 times/day. The three groups were treated for 12 weeks. The parameters assessed in each group before and after treatment included plasma renin activity (PRA), angiotensin II (AgII), endothelin (ET), brain natriuretic peptide (BNP), cardiac functional class and ultrasonic echocardiographic parameters: left ventricular ejection fraction (LVEF), left ventricular fractional shortening (FS), E peak velocity (PEV), E/A ratio changes.

Results In the conventional therapy group, the effectiveness of therapy was 65%. In the benazepril hydrochloride group, the effectiveness of therapy was 80%, which was significantly higher than the conventional therapy group ($p < 0.05$). After treatment AgII, ET, BNP levels decreased ($p < 0.05$), PRA has increased, but was not statistically significant ($p > 0.05$). In the hydrochloride benazepril combination therapy with metoprolol tartrate group, the effectiveness of therapy was of 92.5%; significantly higher than group A ($p < 0.01$); but compared to the group B group, there was no significant difference ($p > 0.05$). Group C as compared to group B, PRA decreased significantly ($p < 0.05$), and AgII, ET, BNP levels also decreased ($p < 0.05$). In particular, in group C, plasma endothelin levels significantly decreased compared with those before treatment ($p < 0.01$).

Conclusion The use of benazepril hydrochloride and metoprolol tartrate or as combination therapy was associated with significantly lower PRA, AgII, ET, BNP and improved cardiac function.