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THE VALUE OF PLASMA NT-PROBNP LEVELS IN PREDICTING THE EFFECT OF DRUG CONVERSION FOR PAROXYSMAL ATRIAL FIBRILLATION

Chen Lei, Liu Xincan, Sun Tianfu, Han Jinghui *The First Affiliated Hospital of Henan University of Tcm*

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Objective To investigate the value of plasma NT-proBNP levels in predicting the effect of drug conversion for paroxysmal atrial fibrillation.

Method The 132 patients with non-valvular paroxysmal atrial fibrillation were treated by oral loading – dose of propafenone (450–600 ng/l) within 1 h after admission. The plasma NT-proBNP concentrations were measured before and after conversion therapy.

Result Atrial fibrillation was converted to sinus rhythm in 83 patients (62.87%) after oral loading-dose of propafenone. The plasma NT-proBNP levels before drug conversion in patients with successful conversion were lower than that in patients with non-successful conversion (419.53 ± 43.83 ng/l vs $458.11.76 \pm 66.09$ ng/l, $p < 0.01$; and it decreased significantly after successful drug conversion (189.61 ± 37.38 ng/l vs 419.53 ± 43.83 ng/l, $p < 0.01$). There was no significant difference of plasma NT-proBNP concentration before and after propafenone treatment ($458.11.76 \pm 66.09$ ng/l vs 444.76 ± 67.28 ng/l ($p > 0.05$)) in patients not converted to sinus rhythm. Receiver Operating Characteristic Curve (ROC curve) analysis was used to determine the optimal cut-off (432.25 ng/l) of this assay for identifying individuals who converted to sinus rhythm from those did not.

Conclusion Atrial fibrillation is a significant factor influencing the secretion of BNP in patients with non-valvular heart disease and plasma NT-proBNP levels can be used as a biomarker to predict the effect of drug conversion for paroxysmal atrial fibrillation.