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P176 Short paper

The relationship between uric acid and brain natriuretic peptide concentrations and heart rate turbulence in patients with congestive heart failure

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Background: Uric acid (UA) and brain natriuretic peptide (BNP) concentrations reflect the severity of systolic dysfunction in patients (pts) with congestive heart failure (CHF). Elevated serum level of UA and BNP is associated with higher cardiovascular mortality. Determination of heart rate turbulence (HRT) is a new noninvasive method used to identify patients with high risk of cardiac death.

Aim: to assess the relationship between HRT and BNP and UA colcentrations in pts with CHF.

Material and methods: UA and BNP concentrations were measured in 64 pts with clinical and echocardiographic symptoms of CHF (24 women and 40 men, mean age 61 ± 12 years) in NYHA class I–IV with sinus rhythm. Pts with atrial fibrillation were previously excluded from the study.

HRT was analysed from 24-hour Holter ECG recordings (Pathfinder 700) and characterised by two parameters: turbulence onset (TO) and turbulence slope (TS).

Results: We observe negative correlation between the TS and UA concentration (r = –0,32; p = 0,02) and between TS and BNP (r = –0,3; p = 0,04). There was no relationship between TO and UA and BNP level.

Conclusions: Blunted HRT, characterised by turbulence slope, is associated with high levels of uric acid and BNP in CHF patients. Significans of these correlations remain to be dectected. The combined assessment of of HRT, BNP and UA may be useful as a potential prognostic marker in CHF patients.