

# Serum N terminal brain natriuretic peptide. Prognostic value in pulmonary hypertension

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**P**ulmonary hypertension (PH) is responsible for a high mortality rate. There are still different opinions concerning the best timing for the invasive therapy (e.g. atrial septostomy, lung transplantation).

Risk stratification helps predicting prognosis in patients with PH, the screening test being the echocardiography. However, the use of echocardiography has limitations. The purpose of this study was to find new simple, rapid and reliable methods to monitor the treatment and assess the prognosis of the patients with PH. The study group included 55 patients diagnosed with PH of different etiologies (idiopathic, collagen vascular disease, congenital shunts, portal pulmonary arterial hypertension, PH due to chronic thrombotic disease not suitable for surgical treatment). It has already been proven the diagnostic and prognostic value of the BNP in patients with left ventricular and right ventricular dysfunction. The methods and parameters used at baseline were: echocardiography, right heart catheterization, 6-min walk test (6MWT), serum N terminal brain natriuretic peptide (NT-pro BNP) and cardiac troponin T;

this study tried to determine whether NT-pro BNP is also related to echocardiographic, functional and hemodynamic variables in PH patients and their prognosis. NT-pro BNP is the inactive part of the BNP molecule, with a higher plasma concentration and a longer plasma half-time than BNP, thus enabling an accurate follow-up in acute and chronic PH.

Serum NT-pro BNP concentration correlated with 6MWT distance, right atrial pressure >10mmHg, cardiac troponin T level, but not with pulmonary artery pressure, which seems to have little importance in the prognosis of patients with severe PH. This study showed that even BNP levels = 1,400 ng/ml can be useful in prognostic assessment of PH patients, guiding the best moment and choice of treatment in these patients, in addition to the BNP level recommended nowadays by the American College of Chest Physicians guidelines published in 2004.

High NT-pro BNP levels (= 1,400 ng/ml) correlate well with right heart morphological and hemodynamical data and predicts a poor long-term prognosis in patients with PH, no matter its cause, idiopathic or not.

*Comment on the paper:*

Fijalkowska A, Kurzyna M, Torbicky A, Szewczyk G, Florczyk M, Pruszczyk P, Szturmowicz M – Serum N-Terminal Brain Natriuretic Peptide as a Prognostic Parameter in Patients with Pulmonary Hypertension. *Chest* 2006; 129:1313-1321