TNF-Alpha and IL-10 serum activity in patients with obesity-associated arterial hypertension depend on bronchial obstruction presence

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Objective: Recent evidence suggests close obesity and arterial hypertension association. Both pathological states are characterized by low-grade inflammation which result in adipokines dysfunction: increased activity of proinflammatory cytokines, such as tumor necrosis factor-α (TNF-α), interleukin-6 (IL-6) and decreased activity of anti-inflammatory cytokines – interleukin-10 (IL-10).

The aim of our research was study relationships between serum TNF-α and IL-10 concentrations and external breathing function disorders in hypertensive patients with obesity.

Methods: 55 Patients with arterial hypertension (AH) were examined. Serum TNF-α and IL-10 levels by ELISA were detected. All patients underwent anthropometry and spirometry. Patients were divided into 3 groups depend on body mass and FEV1 means: 1 gr. – hypertensives with normal body mass; 2nd gr. – obesity-related hypertensives without bronchial obstruction (FEV1 >80%); 3rd gr. – obesity-related hypertensives with bronchial obstruction (FEV1 <80%).

Results: Serum TNF-α (1st gr. – 3.32 ± 1.3 pg/ml, 2nd gr. 6.37 ± 0.6 pg/ml, 3rd gr. – 13.78 ± 4.1 pg/ml; p < 0.05 in all cases) levels increasing were found in relation to obesity and bronchial obstruction development. IL-10 serum levels decreased depend on obesity progression to attain minimum means in AH patients with obesity and bronchial obstruction syndrome (1st gr. – 9.25 ± 1.8 pg/ml, 2nd gr. – 6.57 ± 0.5 pg/ml, 3rd gr. – 4.05 ± 0.9 pg/ml; p < 0.05 in all cases).

Conclusion: Obtained data demonstrate TNF-α levels elevation and IL-10 levels reduction with maximum changes in obesity-associated arterial hypertension with obstructive disorders of external breathing function. Our results suggest possibility of TNF-α and IL-10 involving to obstructive type of ventilation disorders development in the patients with AH and obesity.

Use of B-Natriuretic Peptide in detecting diastolic dysfunction in hypertensive patients


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Background: The potential use of assays of BNP for detection of diastolic abnormalities associated with alterations in blood pressure has not been elucidated.

Objective: This study was designed to determine whether increased plasma concentrations of BNP sensitively reflect abnormal diastolic function associated with hypertension.

Methods: We studied 60 patients with a primary diagnosis of Hypertension. All patients were studied with the use of pulsed Doppler transmural flow velocity and color Tissue Doppler echocardiography for the evaluation of left ventricular diastolic function. Serum BNP was determined with a sandwich immunoassay on ‘Eleycs 2010. Anova / Dunnet’s t test was used when comparing means. The diagnostic utility of BNP was compared with the echocardiographic probability of LV dysfunction through the use of receiver-operating characteristic (ROC) curves.

Results: Patients were divided into 2 groups on the basis of whether they manifested normal or abnormal LV diastolic function by echocardiography. Patients diagnosed with abnormal diastolic function had a mean BNP concentration of 285±31 pg/ml, whereas the normal subjects had a mean BNP concentration of 31±4 pg/ml. The difference between groups was significant (P <0.001). The AUC for the ROC curve with BNP used to detect any abnormal diastolic dysfunction was 0.91 (95% CI, P <0.001). A BNP value of 62 pg/ml had a sensitivity of 85%, a specificity of 83% for detecting diastolic dysfunction.

Conclusion: Our results suggest that the plasma BNP level is influenced by diastolic dysfunction and an assay for BNP can reliably detect the presence of diastolic dysfunction.

Pharmacoepidemiological surveillance of antihypertensive therapy

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Objective: The purpose of this study was to understand the usage pattern of antihypertensive drugs and their fixed dose combination in clinical practice.

Methods: Doctors were asked to fill a questionnaire based on their clinical experiences in dealing with patients with hypertension. These questions were to be answered based on the doctor’s clinical experience. Descriptive statistics were used to describe the results.

Results: We collected completely filled questionnaires from 427 doctors. 46.33 % doctors in their clinical practice encounter 20- 40 newly diagnosed hypertensive patients per month. Among all the patients with newly diagnosed hypertensive there were about 10-