

THE ROLE OF DIABETES MELLITUS 2 TYPE ON ASTHMA COURSE

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ABSTRACT

Background: combination of bronchoobstructive diseases and metabolic disorders is under a great interest of scientists. Diabetes mellitus (DM) is not only associated with abdominal obesity, arterial hypertension, cardiovascular disorders but also associated with deterioration of pulmonary function, particularly decreasing of forced expiratory volume-1-second (FEV1).

Aim: to estimate the role of tumor necrosis factor- α (TNF- α) and interleukin-6 (IL-6) in progression of chronic inflammation in patients with asthma (As) and DM 2 type (DM2T).

Materials and methods: 85 patients were screened. The average age was 54.2 ± 4.56 , average duration of the combination of As and DM2T was 6.7 years, the average waist circumference (WC) – 107.1 ± 5.21 cm, body mass index (BMI) – 33.11 ± 5.26 kg/m². Pulmonary function test was performed for all patients, all of them had marked obstructive changes. The enzyme-linked immunosorbent assay (ELISA) commercial kits for TNF- α and IL-6 were used. For the evaluation of connections between inflammation markers and clinical evaluation the Pierson criteria was used. Biostat software was used for statistical analysis.

Results: we revealed a positive correlation between WC and levels of TNF- α $r=0.56$ ($p<0.05$) and IL-6 $r=0.52$ ($p<0.05$). Also there was a positive correlation between BMI and IL-6 $r=0.64$ ($p<0.05$). The negative correlation was between FEV1 and TNF- α $r=-0.51$ ($p<0.05$) and IL-6 $r=-0.54$ ($p<0.05$).

Conclusion: the obtained data of found connections approve the important role of proinflammatory cytokines in supporting and progression of deterioration of pulmonary function and chronic inflammation in patients with DM2T and As.

