

INFLUENCE OF QUERCETIN ON INFLAMMATORY MEDIATORS LEVELS IN ASTHMA PATIENTS

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Study objectives: to study anti-inflammatory effect of quercetin in asthma patients with different body mass.

Methods: 64 asthma patients were studied after 3 month period of treatment. The 1st group included 20 patients with a normal body mass index (BMI), the 2nd group – 44 patients with obesity – was divided into 2 subgroups. Patients of the 1st group and 22 patients of the 2nd group were treated by a long-acting β_2 -agonist and inhaled steroid in dose appropriate to asthma severity, other 22 obese patients from the 2nd group had used quercetin in addition to β_2 -agonist and inhaled steroid. Obesity was diagnosed according to WHO criteria (1999). Diagnosis of asthma and its severity was defined as provided by GINA (2006). The level of cysteinil leukotrienes, leptin and interleukin-6 was explored. Statistical processing of results was carried out using licensed Microsoft Office 2000.

Results: In 3 months of treatment with long-acting β_2 -agonists and inhaled steroids the level of cysteinil leukotrienes, leptin and interleukin-6 was ($147,7 \pm 12,79$), ($9,8 \pm 0,54$) and ($6,8 \pm 0,38$) pg/ml in asthma patients from the 1st group, ($268,8 \pm 8,91$), ($32,3 \pm 2,10$) and ($17,8 \pm 1,74$) pg/ml in patients from the 2nd group. Addition of quercetin to the standard treatment for obese asthma patients had lead to decrease of cysteinil leukotrienes, leptin and interleukin-6 to ($187,0 \pm 23,4$), ($32,1 \pm 1,94$), ($12,3 \pm 1,22$) pg/ml, respectively.

Conclusion: Complex treatment with quercetin makes it possible to improve results of anti-inflammatory standard treatment in obese asthma patients.