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Assessment of the Immune Status in Obese Asthma Patients

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Asthma, Other Lower Airway Disorders

ACAAI Scientific Research Abstracts

Title

Assessment of the Immune Status in Obese Asthma Patients

Abstract Body

Introduction. Obesity (Ob) may impact the immune status of patients with asthma.

Methods: 84 patients with uncontrolled moderate persistent asthma were compared, 30 patients with asthma (Group 1), 30 patients with asthma -overweight (Group 2), 24 patients with asthma- obesity (Group 3). 21 healthy subjects were the control group. Respiratory function and immune status were assessed.

Results: Group 1 had normal body mass (BMI was 20.54±0.33 kg/m2), Group 2 were overweight (BMI 28.56±0.68 kg/2); Group 3 were Ob (BMI 33.73±0.74 kg/m2). The immune status in Group 3 included significant increase of lymphocytes by 22.3% (35.5±2,4%), of CD3+ by 18.8% (82.7±2,2%) , of CD19+ by 36.9% (15.4±2,2); increased serum IgA, g/l (2.12±0.29) and decreased total IgE IU/ml (98.81±10.35) in comparison with asthma patients with the normal body

weight (27.5±2.5% 66.1±2.1% ; 10.2±1.2% – respectively) (?<0.05); (IgA g/l 1.87±0.11; IgE IU/ml 210.81±196.71). In comparison with healthy patients, the phagocytic activity of neutrophils, significant growth of the metabolic activity of neutrophils, and the index of neutrophil activation were found altered in all the groups of asthma patients. Correlation analysis showed the direct dependence on CD3+ (r=0.59; ?<0.01) and CD4+ (r=0.49; ?<0.01) between CD19+ and the coefficient of fat deposition centralization (r=0.8; ?<0.01).

Conclusion: Asthma and obesity is associated with increase of system inflammation, including increased number of leucocytes, T and B-cells, and decrease of reserve phagocytosis activity.

Educational Objective

Upon completion of this session, participants should be able to: identify that asthma and obesity is associated with increase of system inflammation, including increased number of leucocytes, T and B-cells, and decrease of reserve phagocytosis activity.

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No

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Yes

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