Serum ECP Levels in Asthmatic Patients: Comparison with Other Follow-up Parameters

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Abstract of:

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In recent years, eosinophil cationic protein (ECP) has been considered as a useful eosinophilic activation marker in asrhmatic patients. In this study, serum ECP levels in different stages of bronchial asthma were evaluated. We studied 123 patients suffering from asthma, which was classified as mild (n=49), moderate =49), severe asthma (n=25), and also 31 healthy controls. Serum ECP levels were 13.22 ± 1.11 ng/mL (mean e.m.) in controls, and 30.15 ± 2.38 ng/mL in asthmatic patients. By subgroups, ECP levels were 24.23 ± 3.37 ng/mL, 31.69 ± 4.21 ng/mL and 37.61 ± 4.52 ng/mL, in mild, moderate and severe asthmatic patients, respectively, being the differences among the three groups statistically significant ($P<0.01$ - $P<0.001$). Peripheral blood eosinophil numbers were 157 ± 20 eos/mm^3 in controls, and 334 ± 35 eos/mm^3, 510 ± 87 eos/mm^3, and 658 ± 72 eos/mm^3, in mild, moderate, and severe asthmatic patients, respectively, with significant differences among all groups ($P<0.05$ - $P<0.001$).The serum ECP levels as well as the eosinophil numbers were higher in symptomatic patients than in the asymptomatic ones ($P<0.001$). Moderate negative correlations, although highly significant ($P\leq0.001$), were found between serum ECP levels and forced vital capacity (FVC) (r_s=-0.27), FEV1, MEF25-75 (r_s=-0.31), and MEF50 (r_s=-0.32). There was also a good positive correlation between ECP levels and peripheral blood eosinophil numbers (r_s=0.67, $P<0.001$).

Brucella abortus siderophore 2,3-dihydroxybenzoic acid protects brucellae from killing by macrophages

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Addition of 2,3-dihydroxybenzoic acid, a siderophore produced by Brucella abortus, to macrophage cultures prevented intracellular killing of brucellae during the first 12 h after infection and increased the number of intracellular brucellae recovered at 48 h after infection. The protective effect could be demonstrated with inflammatory macrophages, interferon-g-activated macrophages and with macrophages supplemented with iron, shown elsewhere to facilitate killing of B abortus.