Title: - Role of T-cell in Bronchial Asthmatic

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Abstract:

Background: Bronchial asthma is an inflammatory airway disease characterized by infiltration of inflammatory cells into bronchial tree and increased airway hyper-reactivity to various physical and chemical stimuli.

T-cells play an important role in pathogenesis and inflammatory immune response in bronchial asthma.

The aim of this study was to detect soluble interleukin-2 receptors (sIL-2) serum levels, as marker of T lymphocyte activation in vivo, among bronchial asthmatic children.

Methods: The study was done at King Abdulaziz University Hospital from January 2015 to December 2015. 77 children were included and subdivided into three groups (acute asthmatic; chronic stable asthmatic and control (table 1, demographic data). After History and clinical examination, with acute asthma were classified into atopic and non-atopic groups. Blood sample was taken from all groups and sIL-2R was measured by ELISA technique.

Results: sIL-2R serum level was significantly elevated in acute and chronic asthmatic children versus controls (table 1). Meanwhile, in acute asthmatic, insignificant differences were recorded between different atopic states of the disease (table 2). .

Conclusion:

This study emphasize the role of T cells in asthma and suggest that regulation of their function may be important in the treatment of acute and stable asthmatic children as evident by elevated serum levels of sIL-2R.

Keywords: T cell; Bronchial asthma; soluble interleukin-2 receptors

Table 1, Demographic Characteristics and soluble interleukin-2 receptors (sIL-2) of different studied groups

Item	Control group	Patients with acute asthma Number 30	Patients with chronic (stable) asthma
Age (years) mean P value	4.75±2.20 2.00-9.00	5.33±1.70 2.00-8.00 P >0.05	5.46±1.30 2.00-9.00 P >0.05 *P >0.05
Sex Number of male Number of Female P value	 9 (52.94%) 8 (47.06%)	 16 (53.33%) 14 (46.67%) P >0.05	 17(56.66%) 13 (43.34%) P >0.05
sIL-2R (U/ml) mean range P-value	 240.34 ±355.67 154.00-1252.00 P <0.001	 705.00±1550.00 450.00-2854.00	 308.00±570 154.00-1252.00 P <0.001 *P <0.001