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# A preliminary study of the difference in expression of T helper cells on peripheral blood lymphocytes in asthmatic children under steroid therapy

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This study was designed to determine the T-helper cell subsets in severe asthmatic children and to evaluate the effect of treatment with prednisolon for one week on it and on calculated Th1/Th2 ratio. The study included 20 patients with severe asthma considered as study group and 10 healthy children of cross-matched age and sex and gave blood sample considered as control samples. After thorough clinical examination, chest X-ray examination, routine laboratory investigation included complete blood picture and erythrocyte sedimentation rate. All the study participants gave two samples: pre-treatment and on the 7<sup>th</sup> day after treatment (Post-treatment) for flow cytometric determination of T-helper cell subsets; namely: Pre-T-helper cell (Th0), T-helper cell type 1 (Th1), T-helper cell type 2 (Th2) and the ratio of Th1/Th2. Eight patients were symptomatizing since birth, 4 patients at age younger than one year, in other 4 patients at age of one year and in 2 patients at age of 2 years; while in the other 2 patients disease was presented at age of 4 years. Only one patient (5%) had disease duration of 3 years; while 12 patients (60%) had mean disease duration of  $7.7 \pm 0.8$ ; range: 6.3-9 years and the other 7 patients (35%) had diseased since a mean duration of  $12.3 \pm 1.5$ ; range: 10-14 years. In control group; no APC could be detected in 4 controls (40%) and other controls had 100-500 cells/cc; while another 5 patients had >500 APC cells with a significant increase of frequency of detection of APC in patients compared to controls', ( $X^2=9.15$ ,  $P<0.05$ ) decrease compared to control levels. Furthermore, post-treatment samples showed a non-significant (P