

## ABSTRACT

### **Immunological classification of chronic allergic asthma severity based on Interleukin 4, Interleukin 5 and Eosinophil Cationic Protein (ECP) in sputum.**

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Asthma is a chronic inflammation of respiratory tract. The inflammatory cells involved are T helper 2 (Th2) . Interleukin-4 ( IL-4 ) induces Th-2 and these cells release IL-5 that play a role in eosinophil. Activated eosinophil releases eosinophil cationic protein ( ECP ) that results in respiratory epithelial damage.

The purpose of this study was to define immunological classification of chronic allergic asthma severity based on immunologic marker measurement such as IL-4, IL-5 and eosinophil cationic protein in sputum. Sputum was collected by inhalation of hypertonic saline using an ultrasonic nebulizer device. This non-invasive procedure allowing assessment of airway inflammation. Induced sputum was found to be safe even when disease was severe.

The design of the study was case control study. Subjects were divided into two groups. The first group was thirty five asthma allergic patients which was diagnosed according to GINA criteria and allergic criteria. A positive allergic criteria should be mentioned if there were positive skin test on aeroallergen and total IgE level is above normal value. The control group consisted of thirty non