INTRODUCTION

Allergic disorders are one of the most common diseases of man. It is about 25-30٪Of the total population of the globe is suffering from allergic diseases including bronchial asthma, allergic rhinitis, allergic conjunctivitis, topic dermatitis, food allergy and drug allergy ***(WHO, 2009).***

As regard asthma it is a very common chronic disease in respiratory system in which the constricted airways become inflamed and are lined with excessive amount of mucus ***(Harold and Nelson, 2008).***

In susceptible individuals airways inflammation may cause recurrent or persistent bronchospasm which cause symptoms including wheezing, breathlessness, chest tightness, particularly at night or after exercise ***(Girish and Payel, 2009).***

Asthma is caused by a complex interaction of environmental and genetic factors ***(Martinez, 2007).***

These episodes may be triggered by such things as exposure to an environmental stimulant such as an allergen, environmental tobacco smoke, cold or warm air, perfume, pet dander, moist air, exercise, or emotional stress. In children the

most common triggers are viral illness such as those that cause the common cold ***(Zhao et al., 2002).***

In the past three decades it was witnessed dramatic increase in the prevalence of asthma and allergic diseases worldwide most notably in a western lifestyle ***(Balicer et al., 2007).***

As regard the complement system, it was discovered a century ago as a potent defense cascade of innate immunity. After its first description, continuous experimental and clinical research has been performed and three canonical pathways of activation were established. Upon activation by traumatic or surgical tissue damage, complement reveals beneficial functions of pathogen and danger defense by sensing and clearance of injured cells. However, latest research efforts have provided a more distinct insight into the complement system and its clinical subsequences. Complement has been shown to play a significant role in the pathogenesis of various inflammatory processes such as sepsis, multi-organ dysfunction, ischemia/reperfusion, cardiovascular diseases and many others ***(Christian et al., 2004).***

The role of the complement system in asthma was suggested by ***Roitt et al., 1993,*** possibly through initiation and

or amplification of the inflammatory response of the complement cascade. If this system is involved in the pathogenesis of asthma, serum levels of the complement components are expected to be altered. Complements in asthma have since been studied to a great extent, although reports were conflicting. Some studies have reported significantly increased serum C3 levels where as others have demonstrated no change ***(Najam et al., 2005).***

Aim of the work:

The aims of this study are to compare the levels of C3, C4 in sera of asthmatic as well as control children, and to identify possible involvement of the complement system in asthma**.**