. Introduction

Allergy is a mysterious disease (Tokura *et al.*, 2001; Asada, 2007), it is a chronic condition and is the commonest cause of illness (Papamichael *et al* ., 2007). Allergy is characterized by a state of hypersensitivity induced by exposure to a non-microbial antigen (allergen) that result in harmful immunologic reactions on subsequent exposures; the term is usually used to refer to hypersensitivity to an environmental antigen (Hong *et al.*, 2008). Atopy is a genetic predisposition to the development of immediate (type1) hypersensitivity reactions against common environmental antigens. The term (allergy) is usually used for patients with atopy that means immunoglobulin E (IgE)-mediated hypersensitivity (Arshad *et al.*, 2001; Hong *et al.*, 2008).

Allergens can be found widely in the environment and include common foods and aeroallergens. Aeroallergens, such as the house dust mite, animal dander, insect sting, various grass and tree pollen as well as fungal mould are common. Allergens can enter the body and hence sensitize (cause production of allergen-specific IgE) an individual through the nose (allergic rhinitis), eyes (allergic conjunctivitis), lungs (allergic asthma), gut (food allergy) and in the skin (atopic dermatitis) (Sohi and Warner, 2008).

Gell and Coombs classified hypersensitivity reactions into four types (Rajan, 2003). The four types of reactions include: type 1 is an immediate, IgE-mediated reaction; type 2 is an antibody-mediated reaction (IgG or IgM) that is cytotoxic in nature; type 3 is an immune-complex mediated reaction; and type 4 is a cell-mediated or delayed type reaction (Gobel, 2007).

Allergic diseases are on the rise worldwide (Asher *et al.*, 2006), and in developing countries the prevalence is higher in urban than in rural areas (Liu and Murphy, 2003). A number of factors related to

lifestyle and environmental exposures may explain these observations. Among these, it has been proposed that increases in allergic disease may be related to the immunological effects of a decline in infectious diseases in more developed and urban environments (Mpairwe *et al*., 2008).

The objectives of this study were to detect hypersensitivity among young females in King Abdulaziz University by isolating allergens from Jeddah city (pollen, cockroach, animal dander and food), Also; prepare local allergenic extracts from them then use this extracts in diagnosis of allergy by skin prick test. Then detecting IgE levels in serum. The SPT test was done on 355 students attending king Abdulaziz University in Jeddah.