

European Respiratory Society Annual Congress 2013

Abstract Number: 6027
Publication Number: PP101

Abstract Group: 1.1. Clinical Problems

Keywords: no keyword selected

Title: LSC 2013 abstract - Th17 response to inhaled dermatophagoides pteronyssinus is related to late-phase airway and systemic inflammation in patients with allergic asthma

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Body: Background: Th17 response may have played a role in the development of the late-phase allergen-induced inflammation in allergic asthma. Aim: We investigated Th17 response to inhaled D. pteronyssinus (DP) to establish the importance of these cells in late-phase airway and systemic inflammation in patients with allergic asthma (AA). Methods: A total of 36 subjects were examined: 15 patients with AA who developed early (EAR, n=7) and dual asthmatic reaction (DAR, n=8) after bronchial challenge with DP, 13 patients with allergic rhinitis (AR) and 8 healthy subjects (HS). Peripheral blood (PB) and sputum collection were performed 24 h before as well as 7 h and 24 h after challenge. PB Th17 cells were analyzed by FACS and IL-17 levels were determined by ELISA. Results: Fig.1

Fig.2

Conclusions: The percentage of PB Th17 cells, serum and sputum IL-17 levels were found to be highest in AA patients with DAR. Enhanced Th17 cell response to inhaled DP shows an important role of these cells in the development of late-phase allergen-induced airway and systemic inflammation in patients with AA.