

## A Case of Oral Allergy Syndrome caused by Crown Daisy and Sesame

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**Background:** Oral allergy syndrome (OAS) is a subtype of food allergy, and has been commonly associated with pollen allergy. Crown daisy and sesame leaf are popular vegetables in our country, but food allergy related with these two vegetables has been rarely reported. Here, we experienced a rare case of OAS induced by both crown daisy and sesame leaf, and evaluated their pathogenic mechanisms. **Case history:** A 33-year-old female visited our clinic to evaluate numbness of tongue and gingiva after eating fresh crown daisy and sesame leaf for 2 years. The patient had suffered from allergic rhinitis and atopic dermatitis for 20 years and took medications intermittently. She had also a history of food allergy to crab and shrimp. **Results:** White blood cell counts were 8,600/ $\mu$ L (eosinophil 6.5%) and other routine laboratory tests were unremarkable. Total serum IgE level was 404 KU/L with 68.50KU/L of *D. pteronyssinus* specific IgE and 69.40 KU/L of *D. farinae* specific IgE, measured by immunoCAP<sup>®</sup>. Skin prick test showed strong positive reactions to tree and weed pollens-Hop Japanese (8+), pine (5+), plane tree (3+), sh and willow (3+). Serum specific IgE to crude extracts of crown daisy and sesame leaf were not detected, while high serum specific IgG4 antibodies to two extracts were detected by ELISA. Basophil activation test (BAT) was performed with additions of two extracts, together with anti-IgG4, anti-IgE antibody and, Ca<sup>2+</sup>. The BAT showed significant upregulations of both CD63 and CD203c expressions with additions of both extracts in dose dependent manners. **Conclusion:** We confirmed a case of OAS induced by both crown daisy and sesame leaf, in which non-IgE mediated mechanisms were suggested based on detection of high serum specific IgG4 antibodies and positive results on BAT to each extract.

## Immunoglobulin G subclass deficiency in adult patients with obstructive lung diseases

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**Background:** Immunoglobulin G subclass deficiency (IgGSCD) is a relative common primary immunodeficiency disease in Korean adults and the association of obstructive lung diseases with disturbances in IgG subclasses levels has been recognized. However, there has been controversy of a true biological significance of IgGSCD in patients with chronic respiratory diseases. **Objective:** A retrospective chart review was conducted to characterize the clinical features of IgGSCD in patients with chronic respiratory diseases. **Subjects and methods:** We reviewed the charts of 86 adult patients with bronchial asthma or chronic obstructive pulmonary disease attending our clinics and having IgGSCD from 2001 January to 2012 December. Subjects, classified according to the 10 warning signs by the Jeffrey Modell Foundation, were divided into the two groups: group I (n=11) met the criteria: and group II (n=61) were without recurrent infections. **Results:** A total of 72 patients were enrolled after exclusion of 14 patients receiving concomitant immunosuppressant therapies. The male to female ratio was similar (35:37) and mean age was 62.88±15.34 years with a range of 17 to 87. Mean preFEV1% was 67.57±27.57% at diagnosis of obstructive lung diseases. The major underlying diseases were bronchiectasis (n=23), history of tuberculosis (n=20), cardiovascular disease (n=11) and diabetes (n=8). Isolated IgG3 deficiency is the most common subclass deficiency (n=52, 72.2%), followed by combined with IgG3 and other types (n=11, 15.2%) and isolated IgG4 (n=6, 8.33%). The annual numbers of antibiotics course and the number of hospitalization related to infectious causes were significantly higher in group I than group II ( $p<0.0001$  and  $p=0.012$ , respectively). In both groups, the most common infectious disease was pneumonia, followed by rhinosinusitis, zoster, otitis media and urinary tract infection. **Conclusion:** IgG3 subclass deficiency was the most common type and lower levels of IgG subclasses were associated with an increased susceptibility to respiratory infection in adult patients with obstructive lung diseases. **Keywords:** Adult; asthma; chronic obstructive lung diseases; IgG subclass deficiency; respiratory tract infection