# New Clues with Omalizumab for Broncho-Cutaneous Hyperresposiveness

# Omalizumab Havayolları ve Derinin Ortak Uyarılabilirliği Konusunda Yeni İp Uçları Verebilir

Omalizumab Broncho-Cutaneous Hyperresposiveness

Erol Kılıc[1], Ercan Karabacak[2], Ali Kutlu[3]
[1]Department of Chest Disease, Kasimpasa Military Hospital,
[2]Department of Dermatovenereology, GATA Haydarpasa Teaching Hospital,
[3]Department of Allergy and Immunology, GATA Haydarpasa Teaching Hospital, Istanbul, Turkey

**To the editor:**

Chronic Inducible Urticarias (CIU) including mainly symptomatic dermographism (SD) are heterogen disorders which are commonly seen, generally not life threatening however negatively effecting quality of life. In most situations, the disease aetiology is unclear which has an important role in treatment failure. Although they are not commonly accepted, there are some hypothesis for the role of IgE in dermographic urticaria. It was showed that dermographism might be passively transferred to the skin of healthy individuals and it was attributed to an IgE-mediated immune reaction [1]. It was shown that the rate of dermographism is higher in atopic children as compared with healthy controls [2]. Increased IgE levels in patients with SD, compared to healthy control group may be associated with mediator release and this leads to an increase in receptor expression and can be a reason for increase in exitability of cutenous and bronchial tissues [3]. Bronchial asthma is characterized by inflammation of the lower respiratory tract leading to hyperactivity and a variable degree of reversible airway obstruction. Elevated serum IgE is a sign of atopy, and causes bronchial hyperactivity in atopic individuals. Omalizumab is a monoclonal IgG anti-IgE antibody, which has been approved for its use in severe asthma. Although the use of omalizumab has been reported to improve Dermatology Life Quality Index (DLQI) in patients with chronic urticaria, its effectiveness has not been widely studied in patients with physical urticaria.

We retrospectively retrieved our records and identified five patients who had used omalizumab due to allergic asthma and coexistent physical urticaria (symptomatic dermographism) which can not be controlled first and second generation high dose antihistaminic drugs. Patients received initial omalizumab treatment at a dose of 150 to 300 mg/month for 16 weeks. DLQI was measured before and after three months of omalizumab treatment [4]. There were 3 female and 2 male patients (mean age, 28.4 ± 10.1 years). All patients laboratory tests were in normal limit. One patient received omalizumab for 2 months and the remaining completed initial omalizumab treatment. In addition to allergic asthma and physical urticaria, one patient has contact dermatitis and one patient has atopic dermatitis. Allergy scin prick tests were positive for house dust mite mix in all patients. Life quality of all patients was prominantly improved and DLQI scores were observed to significantly decline following omalizumab treatment (17.8 ± 4.4 vs.4.8 ± 2.2; $p<0.05$)

It was shown that anti IgE treatment was effective in patients with sypmtomatic dermographism. [5] Although, the diagnosis of CIU was established by standartized provocation tests, probable triggering and/or associated factors (psychic factors, atopy, thyroid diseases, diabetes, menopause, existence or history of infectious and/or other systemic diseases, drug reaction etc) were not mentioned in previous studies.

Beneficial effectiveness of anti-IgE treatment in both allergic asthma and physical urticaria, as seen in our cases, shows that Ig E has a central role in the pathogenesis of both disorders, at least in some cases. Whether anti-IgE treatment is more effective in some types of urticaria or some condition associated with urticaria (atopic asthma etc) remains to be answered.

In conclusion, effectiveness of omalizumab treatment in both asthma and physical urticaria may be a clue for the presence of broncho-cutaneus hyperreactivity.

References
1. Newcomb RW, Nelson H. Dermographa mediated by immunoglobulin E. Am J Med 1973;54:174-80.
2. Martorell A, Sanz J, Ortiz M et al. Prevalence of dermographism in children. J Invest All Clin Immunol 2000;10:166–9.
3. Henz BM, Jeep S, Ziegert FS, Niemann J, Kunkel G. Dermal and bronchial hyperreactivity in urticarial dermographism and urticaria factitia. Allergy 199;51(3):171-5.
4. Finlay AY and Khan GK. Dermatology Life Quality Index (DLQI): a simple practical measure for routine clinical use. Clin Exp Dermatol 1994;19:210–6.
5. Metz M, Altrichter S, Ardelean E, Kessler B, Krause K, Magerl M, Siebenhaar F, Weller K, Zuberbier T, Maurer M. Anti-immunoglobulin E treatment of patients with recalcitrant physical urticaria. Int Arch Allergy Immunol 2011;154(2):177-80.

DOI: 10.4328/JCAM.3335 Received: 21.02.2015 Accepted: 22.02.2015 Printed: 01.02.2016
Corresponding Author: Ali Kutlu, Kiptaş Hilal Konutları A-4 D-17 İçerenköy, Ataşehir, İstanbul, Türkiye. GSM: +905324105582 E-Mail: kotiloglu@hotmail.com