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Background: Churg-Strauss Syndrome (CSS) is a rare systemic necrotizing small vessel vasculitis associated with bronchial asthma, peripheral blood eosinophilia and eosinophilic lung infiltration. Skin changes compatible with vasculitis are present in about 75% of patients. Previous reports suggest that patients with CSS can be treated with anti-IgE (omalizumab) in addition to conventional therapy to achieve asthma control. Here we report the efficacy of a 6-month treatment with omalizumab in a patient with CSS characterized by severe asthma and urticarial vasculitis.

Methods: A 44 year old Caucasian female with a 5 year history of severe asthma, chronic urticaria and mild eosinophilia (1100/µL) was evaluated for possible CSS. Total serum IgE was 662 KU/L with positive skin prick tests for dust mites. Bronchial asthma was not controlled and FEVI was 60% despite treatment with budesonide (640 mcg/die) and formoterol (18 mcg/die). Diffuse and confluent urticarial rash occurred in the last 6 months before evaluation and responds neither to prednisone (10 mg/die) and rupatadine (10 mg/die) nor to immunosuppressive agents (cyclosporin 200 mg/die or azathioprine 100 mg/die). The patient was treated, as add-on therapy, with omalizumab (300 mg s.c. every 2 weeks) accordingly to total IgE and weight parameters reported in the drug information leaflet.

Results: After 6 months of treatment the patient reported a significant improvement in asthma control with 50% reduction of nocturnal awakenings and asthma exacerbations and a major FEVI improvement (101% at 16 weeks and 103% at 24 weeks). Eosinophil count was reduced to 600/µL. A 75% reduction of oral prednisone was registered after 8 weeks of treatment. Importantly, urticarial lesions disappeared after the first injection of omalizumab. Omalizumab injections were well tolerated and no adverse event was recorded.

Conclusions: This case suggests that omalizumab can be beneficial and safe in patients affected by CSS with severe asthma and urticarial vasculitis. In addition to its effect on serum IgE, efficacy of omalizumab in CSS may be related to an inhibitory effect on blood eosinophilia.

![Image](https://via.placeholder.com/150)

**277 Serum Soluble Trail Levels in Patients With Severe Persistent Allergic Asthma: Its Relation to Omalizumab Treatment**

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Background: The pathogenesis of allergic asthma and other allergic conditions is believed to be closely interrelated because of the similar dynamics of allergy-inducing cells and molecules, and the independent evidence for their clinical overlap. In this study we compare the diseases and the effect of Omalizumab treatment on the dynamics of cell apoptosis regulating molecules.

Methods: In the first group, 6 males and 8 females (a total of 14 patients) were selected with severe persistent asthma with a mean age of 42.4 years (Table I). All patients received omalizumab therapy for 4 months, with treatment administered every 2 weeks. Symptoms and severity of allergic reactions were recorded before and after treatment with omalizumab. Clinical changes and adverse effects were assessed and recorded at each patient visit. The second group consisted of 14 newly diagnosed allergic asthma patients with mean age was 43.8 years. All of these patients were followed up in the Allergy Clinic of the Antalya Education and Training Hospital, and were evaluated by clinical status. The third group consisted of 14 healthy volunteers, with no difference in age and sex (mean age was 43.3 years. Serum sTRAIL levels in all individuals (patients and healthy controls) were measured by a sandwich enzyme-linked immunosorbent assay (Diaclone, France).

Results: There were no differences between the healthy controls, newly diagnosed allergic asthma patients and non-treated severe persistent allergic asthma patients during the active phase ($P < 0.05$). Interestingly, the variance levels in patients who received omalizumab treatment were significantly lower than the healthy controls.

Conclusions: In summary, we speculate that the physiological functions of sTRAIL in allergic conditions, and the elucidation of the molecular mechanisms by which sTRAIL: TRAIL receptor signals cells, will be of significant interest to the scientific allergy community in the coming years. Our study provides a novel perspective on severe persistent allergic asthma and the effect of omalizumab treatment on cell apoptosis, using serum sTRAIL measurements.
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Background: There is no data available to adequately explain the alterations in total antioxidant capacity, hydrogen peroxide, malondialdehyde and total nitric oxide concentrations in severe persistent asthma and newly diagnosed allergic asthma patients. In the study below we have examined changes in total antioxidant capacity, hydrogen peroxide, malondialdehyde and total nitric oxide levels in severe persistent asthma and newly diagnosed allergic asthma patients and the association(s) between these variables.

Methods: The first group of patients included 6 male and 8 female subjects with severe persistent asthma, having a mean age of 42.4 years. A second group of subjects consisted of 14 newly diagnosed allergic asthma patients with a mean age of 43.8 years. All patients were followed in our clinic, and were evaluated by clinical status. A third group of 14 age-sex matched healthy controls were also included. Serum samples were collected and stored at –70 °C until use for the determination of total antioxidant capacity, hydrogen peroxide, malondialdehyde and total nitric oxide concentrations. Serum IgE levels, ANA, RF, hepatitis markers, C3, C4 and eosinophil levels were evaluated in all patients. All assays were carried out in duplicate.

Results: Total antioxidant capacity levels of Group IA, group II and group III were lower than that of IA group. Total antioxidant capacity levels of groups II and III were higher than in group IB. Hydrogen peroxide concentrations in group IB were lower than in group IA, while concentrations in group II were higher than in group IB. The malondialdehyde concentration of group IB was lower than in all other groups. The malondialdehyde concentration of group III was higher than all other groups. The malondialdehyde concentration of group II was lower than in group III. The total nitric oxide level of group IB was lower than all other groups. The total nitric oxide level of group III was higher than all other groups, while that of group II was higher than for both groups IA/IB.

Conclusions: To monitor the omalizumab treatment efficacy in the severe allergic asthma patients, total antioxidant capacity, hydrogen peroxide, malondialdehyde and total nitric oxide concentrations might be new markers.

Results: There was a significant clinical improvement in 4 patients after treatment with omalizumab with improved daytime symptoms by 75% and 68% nocturnal P ≤ 0.001, as well as 100% improvement in revenue and hospitalizations to floor, well as income to the ICU with P ≤ 0.001. No further episodes of near-fatal asthma. In addition to decreased use of systemic steroids 90% (P < 0.003) and inhaled steroids 60% (P < 0.005).

Conclusions: Omalizumab is a good treatment option in patients with poorly controlled asthma with near-fatal asthma episodes.

Use of Omalizumab in Chronic Moderate to Severe Persistent Asthma—An Indian Experience

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Background: The worldwide prevalence of asthma is high and increasing. In India prevalence of asthma is variable from 4% to 20%. Despite ICS plus LABA therapy 72% of asthma patients were uncontrolled or not well controlled in INSPIRE study. Immunoglobulin E plays a central role in inflammatory cascade. To study the efficacy of omalizumab in Indian patients with moderate to severe persistent asthma in terms of quality of life (QOL) improvement, reduction in severe exacerbation, ED visits and loss of working days.

Methods: 52 patients aged from 12 years to 86 years (23.3 % females, avg age: 33.6, avg S.IgE: 283) fulfilling omalizumab indication criteria were given 150 mg subcutaneously once in 2 or 4 weeks for 16 to 24 weeks during March 2007 till date. QOL assessment 52 weeks after treatment in terms of following parameters were studied: Asthma symptoms (Cough, wheezing, tightness in the chest) Night Symptoms (frequent awakening, sleep disturbances) Rescue medication use Loss of working days/school days Emergency visits.

Results: 94% of patients were able to reduce or discontinue regular OCS use. 72% reduction in exacerbations, 76% reductions in emergency visits ICS/ LABA dose was maintained/reduced in ~ 93 % patients. ~54% improvement in working/school days in the age group of 12 to 40 years. 60% improvement in uninterrupted sleep hours best improvement in QOL was observed in 12 to 40 years age group.

Conclusions: Omalizumab is well tolerated and effective as an add-on therapy in patients of moderate to severe persistent Asthma and offers a therapeutic and economic benefit to patient. Its potential as disease modifier and early intervention in treatment guidelines needs further studies.