



**A Characterization of Patients Receiving Biologics for Chronic Inflammatory Diseases in a Tertiary Otolaryngology and Allergy Practice**

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**Objectives:**

Biologics, such as omalizumab, benralizumab, dupilumab, and mepolizumab, are used to treat nasal polyposis, asthma, atopic dermatitis, and chronic idiopathic urticaria. We aim to characterize the patients receiving biologics for these type 2 inflammatory diseases from a single tertiary otolaryngology and allergy practice.

**Materials and Methods:**

A retrospective chart review was conducted to identify patients prescribed a biologic between January 2000 and May 2020. Collected data included demographic information, comorbidities, medication usage, and clinical progress. The primary outcome measurements include changes in usage of systemic corticosteroids and emergency room (ER) visits up to 2 years after biologic initiation.

**Results:**

From an initial 109 patients, 99 patients provided sufficient datapoints and were included for analysis. Fifty-eight of the patients were female. The mean age was 49 (range 9-82). Biologic agent initiation resulted in reduction in overall systemic corticosteroid requirements: 142,003.00 mg of prednisone were prescribed before biologic use, while 72,140.00 mg of prednisone were prescribed after initiating biologics ( $p=0.0099$ ). A total of 152 oral corticosteroid prescriptions were written before biologic initiation compared to 85 after biologic initiation ( $p=0.0039$ ). There was no significant reduction in ER visits after biologic agent initiation (88 before versus 61 after,  $p=0.1183$ ).

**Conclusions:**

There was a significant decrease in steroid usage after biologic medication prescription. There was a trend towards decreasing ER visits, but it did not reach statistical difference.