htd
hrvatsko torakalno društvo

TORAKS 2019

9. Kongres Hrvatskog torakalnog društva
9th Congress of Croatian Thoracic Society

Hotel Westin Zagreb
10.–13. 4. 2019.

TREATMENT WITH A COMBINATION OF OMALIZUMAB AND BENRALIZUMAB IN SEVERE ASTHMA: A CASE REPORT

ŠTAJDUHAR A.[1], Ćuk B.[2], Dukić V.[3], Lampalo M.[1], Popović-Grle S.[1], Samaržija M.[1]

[1] KBC Zagreb, Zagreb, Croatia
Klinika za plućne bolesti Jordanovac

[2] OB Dr. Ivo Pedišić, Sisak, Croatia
Odjel za pulmologiju i produženo liječenje s palijativnom skrbi

[3] Specijalna bolnica za medicinsku rehabilitaciju Thalassotherapia Crikvenica, Crikvenica, Croatia
Poliklinika-interna medicina

Objective: Asthma is a chronic inflammatory disease affecting airways. Various methods, including genotyping, have been used in an attempt to better describe and treat different phenotypes. The introduction of biologic agents enabled more efficacious treatment of severe asthma and is based on biomarkers (for instance blood eosinophil count or IgE) but determining patients who will respond well to this treatment can still be challenging. We present a case of a 37 year old woman who was diagnosed with severe asthma at the age of 23. She is an ex-smoker, pack years 4, steroid dependent, suffering from Mb. Cushing, osteoporosis with multiple fractures and diabetes mellitus on insulin pump. She also suffers from atopic dermatitis and allergic rhinitis. She was treated with inhaled (beclomethasone 800 mcg daily) and oral (methylprednisolone 16 mg daily) corticosteroids in combination with formoterol (48 mcg daily), tiotropium (2.5 mcg daily) and montelukast (10 mg daily). Despite that, she had more than 10 severe asthma exacerbations, including several hospitalizations, in the ten-year period. The dominant symptom was dyspnea (ACT 5). Laboratory tests showed blood eosinophilia (8.6 %; 0.86 x 109 /L), elevated eosinophil cationic protein (42.7 mcg/L), total IgE (149 kU/L), and sensitization to Ambrosia elatior and Aspergillus fumigatus (IgE 0.37 kU/L and 0.16 kU/L respectively). Spirometry showed mild obstruction

(FEV1 2.26 L; 69.20 %, FVC 3.22 L; 92.7 %, FEV1/FVC 0.68) with positive reversibility test (+ 270 ml; 12 %). Omalizumab 300 mg monthly was added with the reduction of blood eosinophil levels, exacerbations to once yearly, rise in ACT to 17 and FEV1 to 2.69 L (82.4 %). After a total of 24 cycles, oral methylprednisolone could not be discontinued, so omalizumab was switched to mepolizumab 100 mg monthly with no improvement in symptom control or amelioration of obstruction (FEV1 1.81 – 2.12 L; 57.0 – 65.0 %). After 12 cycles of mepolizumab, benralizumab 30 mg monthly was introduced instead. After three cycles, pulmonary function worsened (FEV1 decreased to 52 %), with high FeNO (157 ppb) so omalizumab 450 mg monthly was added to benralizumab 30 mg every two months with good tolerability.

Biologic therapy has been present for more than a decade and has proven to be a safe treatment option. The usage of a combination of different biologic agents, such as anti-IgE and antibody against interleukin-5 receptor is still under investigation. We hope that our case report will help in the future decision makings.