

BIOLOGICAL THERAPY IN SEVERE ASTHMA ADULT PATIENTS -EXPERIENCE FROM UNIVERSITY HOSPITAL CENTRE ZAGREB, CLINICAL DEPARTMENT FOR LUNG DISEASES JORDANOVAC

LAMPALO M.¹, Samaržija M.¹, Popović Grle S.¹

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¹ Klinika za plućne bolesti Jordanovac, Zagreb, Croatia Zavod za alergiske i opstruktivne bolesti

Objective: Severe asthma phenotypes represents heterogeneous group of patients. Severe asthma is defined by the level of treatment needed to achieve control or who remain uncontrolled despite high doses of inhaled corticosteroids with another controller .

We have followed the group of very severe asthma patients with many exacerbations for few years. Some of them were hospitalized, and some had emergency interventions. All of them had asthma treatment in step 5, including oral steroid, but still were not in good asthma control. According to clinical and molecular findings, as well as lung functions tests, we assesses predominant etiopathological pathway and decided which is the most probably best biological treatment for them.

Chech guidelines from 2017. suggested pragmatic division of severe asthma phenotypes due to allergic and/or eosinophilic etiology.

We have divided our severe asthma patients according to the named guideline and found that only 10/32 patients have clean allergic (without eosinophilia) or eosinophilic phenotype (without allergy). Allergic non-eosinophilic phenotype received anti IgE therapy (omalizumab), while eosinophilic phenotype received anti IL-5 therapy (2 mepolizumab and 3 donated reslizumab). More patients had mixed allergic and eosinophilic asthma phenotype 22/32, 10 of them are treated with omalizumab, 12 are treated with anti IL-5 therapy (7 with mepolizumab, and 2 with donated reslizumab).

From the whole group of severe asthma patients on biological treatment, we found only two patients as non-



responder to anti IgE, and one patient as non-responder to anti IL-5 therapy, with a notice that significantly bigger number of severe asthma patients were treated with anti IgE therapy, started two years earlier than anti IL-5 therapy. All other patients with severe asthma gain lot of benefits on biological therapy, with decreased daily and night symptoms, better exercise tolerance, lower dosage of oral steroids, improved lung function, FEV1 increase from 280 ml to 1160 ml, and significantly less asthma exacerbations.