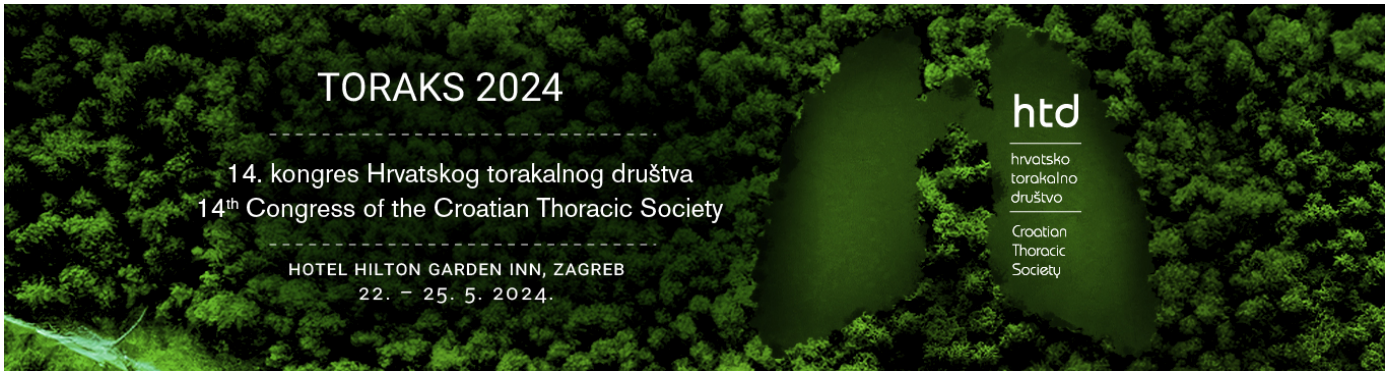



# SEVERE ASTHMA OR “DIFFICULT – TO TREAT ASTHMA” – A CASE REPORT

*BEGOVAC M.[1], Štajduhar A.[2], Posavec A.[3], Rašeta M.[4], Miculinić N.[2], Pavliša G.[2], Popović-Grle S.[2]*

[1] Dom zdravlja Zagreb Zapad, Zagreb, Croatia
*Opća interna*

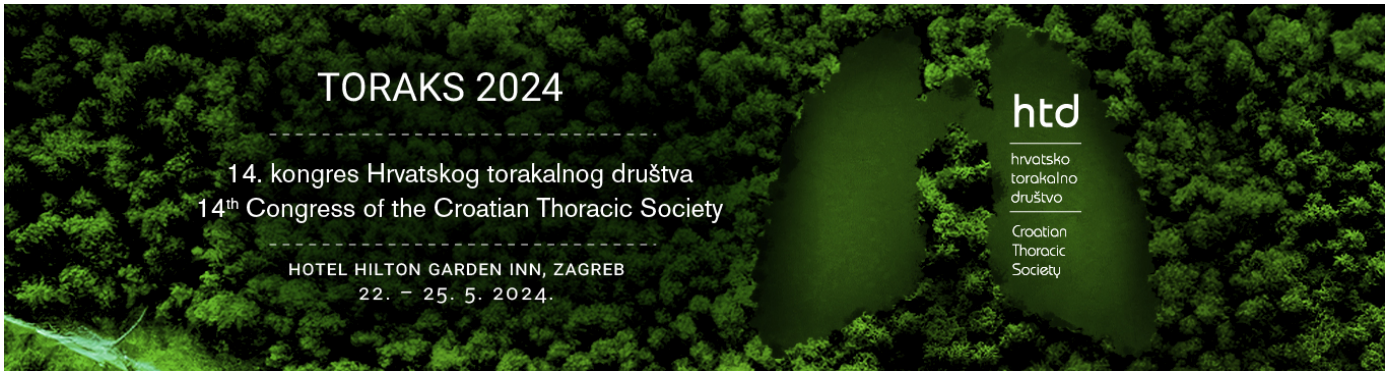
[2] Klinički bolnički centar Zagreb, Zagreb, Croatia
*Klinika za plućne bolesti Jordanovac, AOP*

[3] OB Dr. Ivo Pedišić , Sisak, Croatia
*Pulmologija*

[4] OB Tomislav Bardek , Koprivnica, Croatia
*Pulmologija*

**Background:**

“Difficult – to - treat asthma” is asthma that is uncontrolled despite GINA Step 4 or 5 treatment, or that requires such treatment to maintain good symptom control and reduce risk of exacerbations. Severe asthma is a subset of “difficult - to treat asthma” - uncontrolled despite adherence with maximal optimized therapy and treatment of contributory factors.




**Conclusion:**

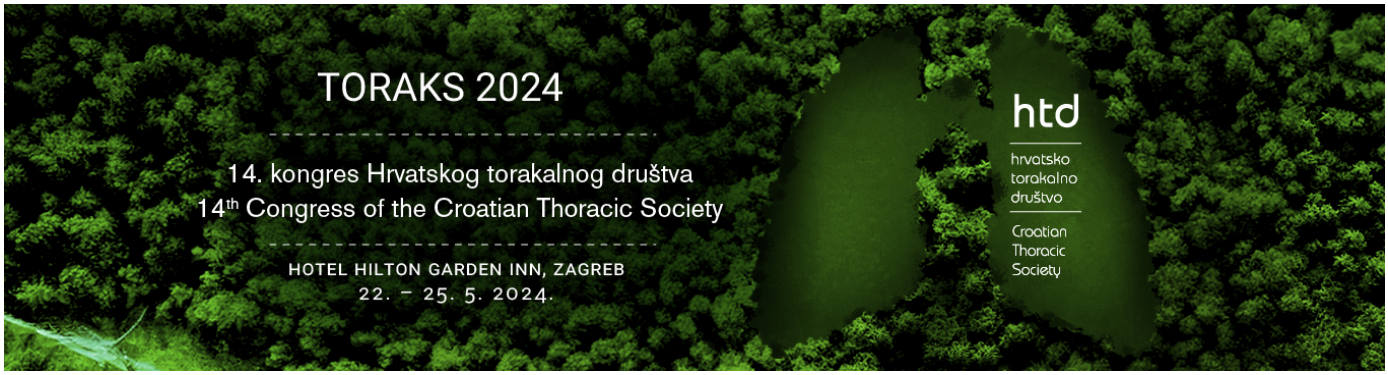
In conclusion, we observed a non-adherent patient with multiple comorbidities in whom despite maximal optimized pharmacotherapy, advice on non-pharmacological asthma management, disease control was not achieved. Based on pulmonary function test results, applied pharmacotherapy, and the number of hospitalizations due to exacerbations, this patient is categorized into the severe asthma group. However, it is difficult to definitively conclude severe asthma status since interventions targeting modifiable factors were unsuccessful.

**Case:**

The patient is a 46-year-old male diagnosed with eosinophilic non-allergic asthma that manifested in adulthood.

The initial encounter with the patient occurred when he went to the emergency room due to symptoms of asthma exacerbation triggered by a respiratory infection. Latest spirometry results (3 months before) showed moderately severe obstruction of ventilation with slightly reduced VC and FVC.

The next control was after one month in the pulmonology clinic. By spirometry, there were still moderate obstructions of ventilation with a positive Ventolin test (18%). Escalation of therapy was recommended.




The next scheduled follow-up was set for 6 months later, but due to an asthma exacerbation and subsequent global respiratory insufficiency, the patient was hospitalized two months earlier. He did not change his habits, he was still a smoker, and did not lose weight. Notable among the radiological findings was the MSCT of the thorax from an external institution, which revealed no significant pathologies such as bronchiectasis or air trapping. Microbiological analysis was negative. The highest measured eosinophil count was 1000 mcl/blood, and FeNO was low. Spirometry was stationary, while diffusing capacity was normal. Polysomnography revealed severe obstructive sleep apnea, necessitating the use of a CPAP device. A nutritionist was included in the treatment and pulmonary rehabilitation was carried out. Therapy was once again escalated.

At the revaluation, after four months, a significant decline in lung function was noted, characterized by severe obstructive ventilation disorders alongside reduced VC and FVC Ventolin test was positive. He still continued smoking and gained weight. He was presented to the "Severe Asthma Team" and, in addition to all previous therapy, the start of treatment with mepolizumab was indicated.