

Switching biologics in an asthmatic patient with adverse reaction to initial therapy



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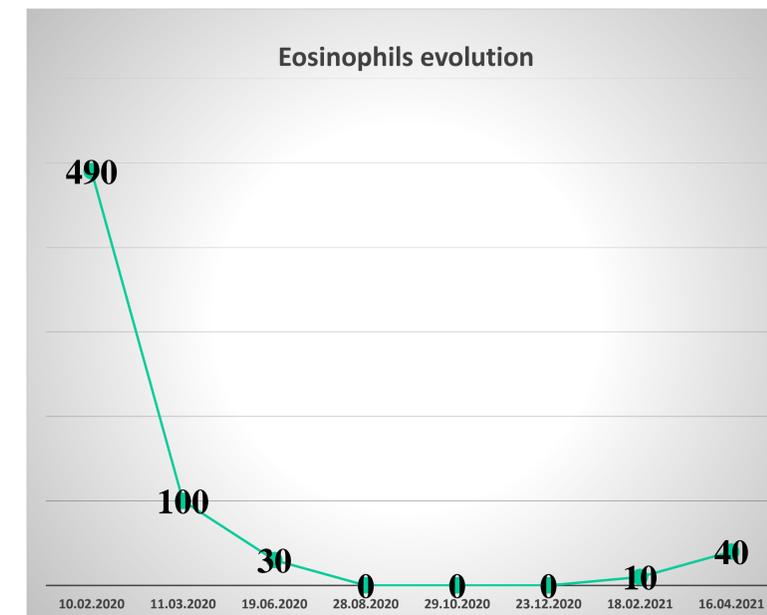
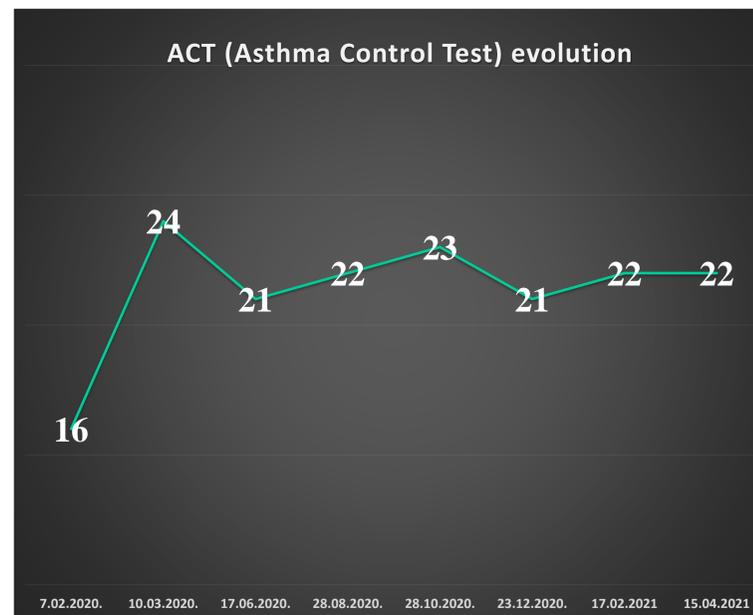
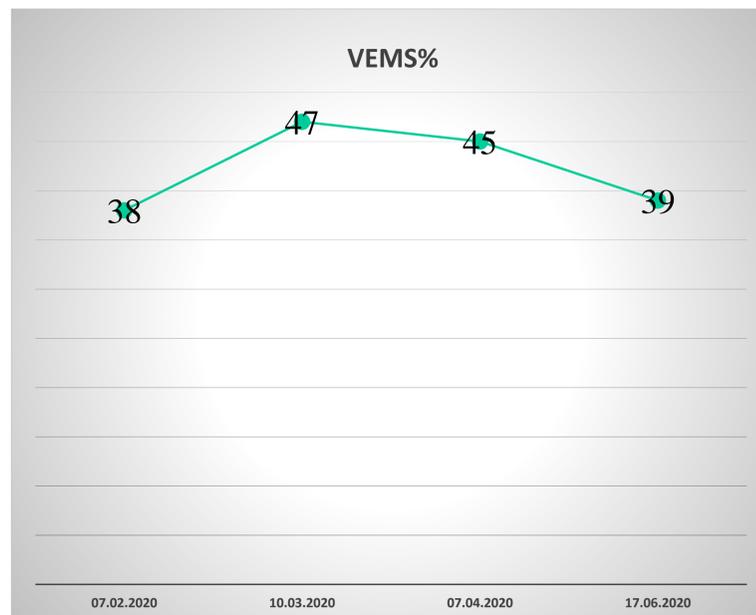
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Introduction

About 5% of the patients with asthma have severe asthma that remains inadequately controlled, a subject of constant research as it greatly affects patients' quality of life.

Monoclonal antibodies are a relatively new therapeutic option for patients with severe refractory asthma used as an add-on to maintenance therapy. Omalizumab is a humanized monoclonal antibody which binds to circulating IgE antibodies and is used to treat moderate to severe allergic asthma poorly controlled with inhaled corticosteroids and long-acting β_2 agonist bronchodilators. Benralizumab is an IL-5 receptor monoclonal antibody used in the treatment of severe eosinophilic asthma (SEA), efficient in reducing exacerbation rates, use of oral corticosteroids and improving asthma symptoms control.

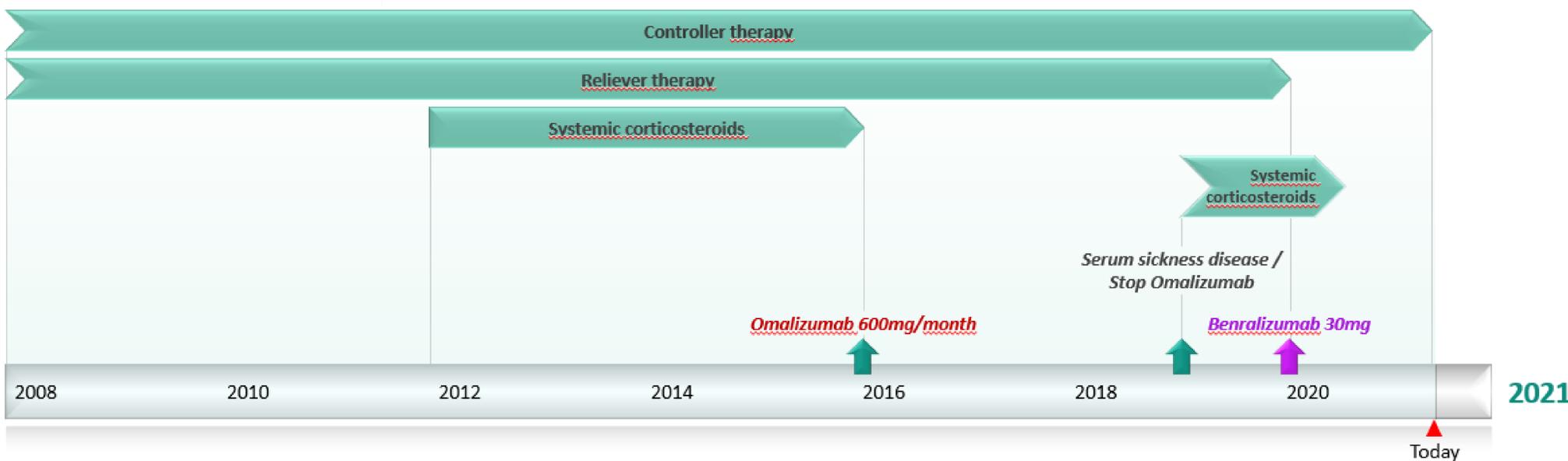


Case presentation

44-year-old man with severe allergic asthma GINA step 5, NSAID hypersensitivity and chronic polypoid rhinosinusitis showed progressive decline in lung function.

Results

After the initiation of benralizumab the patient no longer had exacerbations, his lung function improved and the quality of life drastically changed for the better.



*Criteria of eligibility for biologic therapy	Omalizumab	Benralizumab
Total IgE value (30-1500 IU/ml)	>200-300 IU/ml	205 IU/ml
Positive skin tests to perennial aeroallergens	+ for house dust mites	NA
Uncontrolled severe asthma step 4-5 GINA	+	+
Eosinophils \geq 150/uL (under systemic corticotherapy)	NA	490/uL

Conclusion

In a patient considered eligible* for several types of biologic therapies, when tolerability to the initial therapy (Omalizumab for a patient with chronic polypoid rhinosinusitis) is unattainable, with development of adverse reactions, switching biologics can be a promising option. In this case, the use of benralizumab was feasible and safe in decreasing and eventually ceasing the use of systemic corticosteroids, improving both symptomatology and quality of life.

References
 1. Thomson NC, Chaudhuri R. Omalizumab: Clinical use for the management of asthma. *Clin Med Insights Circ Respir Pulm Med*. 2011. doi:10.4137/CCRPM.S7793
 2. Kavanagh JE, Hearn AP, Dhariwal J, et al. Real-World Effectiveness of Benralizumab in Severe Eosinophilic Asthma. In: *Chest*. ; 2021. doi:10.1016/j.chest.2020.08.2083