UNRECOGNIZED ROLE OF PRIMARY IMMUNODEFICIENCY IN SEVERE ASTHMA

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Objective:

Introduction

Primary immunodeficieny disorders (PIDs) are a heterogeneous group of disorders that have absent or poor function in one or more components of immune system. There is a wide range of clinical symptoms but infection susceptibility is always present. Frequent respiratory infections can lead to airway remodeling, bronchial wall thickening and bronchiectasis which can worsen symptoms, course and outcome of chronic pulmonary diseases such as asthma.

Case report

A 56-year-old male patient with severe allergic asthma has been followed up by pulmonologist in tertiary referral hospital. He has been treated with high-dose inhaled steroids, long-acting b2-agonists, long-acting muscarinic receptor antagonists, montelukast, peroral glucocorticoid, theophylline and later phosphodiesterase type 4 inhibitor. Despite optimal treatment he had approximately six exacerbations per year of which two required hospitalization. Infectious agents were the cause of most of his exacerbations. After the initiation of therapy with omalizumab there was an improvement in pulmonary function tests, significant dose reduction of peroral glucocorticoid and decreased use of short-acting bronchodilators but respiratory tract infections remained frequent. Further diagnostic tests revealed decreased IgG values with decreased levels of IgG1 and IgG2 in all repeating tests. Due to unclassified antibody deficiency and frequent respiratory tract infectious the patient was started on Ig replacement therapy in dose of 30g every 4 weeks. After 6 months of IVIG there was significant reduction in number of infections with consequently reduction in asthma exacerbations and use of antibiotics.

Conclusion

With this case report we wanted to increase awareness and enable timely recognition of possible PID in patients with severe asthma. Since it could contribute to severity of the disease, there is a need for better definition and treatment options of decreased values of IgG and its subclasses.


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