ALLERGIC RHINITIS AND OTHER ALLERGIC AND AUTOIMMUNE DISORDERS IN CHILDREN WITH IgA DEFICIENCY

Srđan Ante Anzić, MD, Ph.D., Srebrnjak Children's Hospital, Zagreb, Croatia
Helena Munivrana Škvorc, MD, Ph.D., Srebrnjak Children's Hospital, Zagreb, Croatia; Assist. Prof. at University North, Varaždin, Croatia
Ivana Jerković, MD, Srebrnjak Children's Hospital, Zagreb, Croatia
Marko Škvorc, MD, Clinic for Women's Health and Obstetrics, University Hospital Centre Zagreb, Croatia

DJEČJA BOLNICA SREBRNJAK

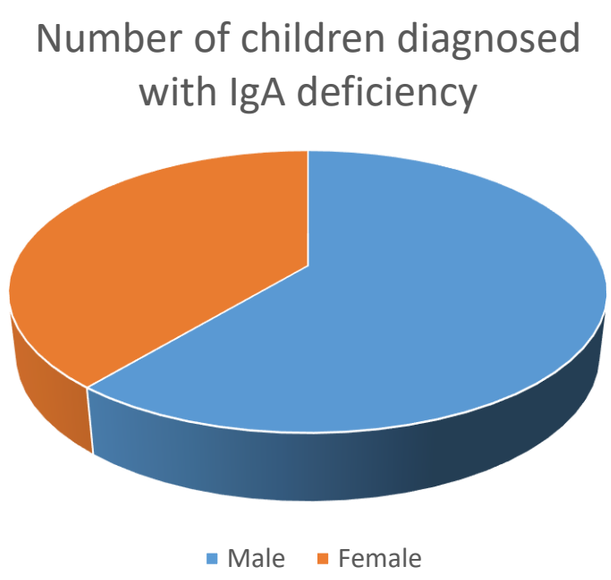
Introduction

Selective IgA immunodeficiency is the most frequent primary antibody deficiency. Serum IgA level is decreased or even completely absent, while IgM and IgG antibodies display normal serum levels. [1] IgA plays an important role in immune protection in gastrointestinal and respiratory tract. Patients with selective IgA immunodeficiency can be asymptomatic (>50% of cases) and suffer from recurrent gastrointestinal and respiratory infections, allergies and autoimmune diseases. [2] Allergic rhinitis (AR) is the most common cause of chronic rhinitis. Characteristic feature of allergic rhinitis is eosinophilic inflammation of nasal mucosa. Several studies have shown that IgA represents a potent trigger of eosinophil degranulation, while others have shown that IgA immunodeficiency is a well-known risk factor for atopy. [3-4] Aim of this study was to evaluate the frequency of allergic rhinitis and other allergic and autoimmune disorders in children with IgA immunodeficiency to secure proper management of the condition to prevent complications and improve patients' quality of life.

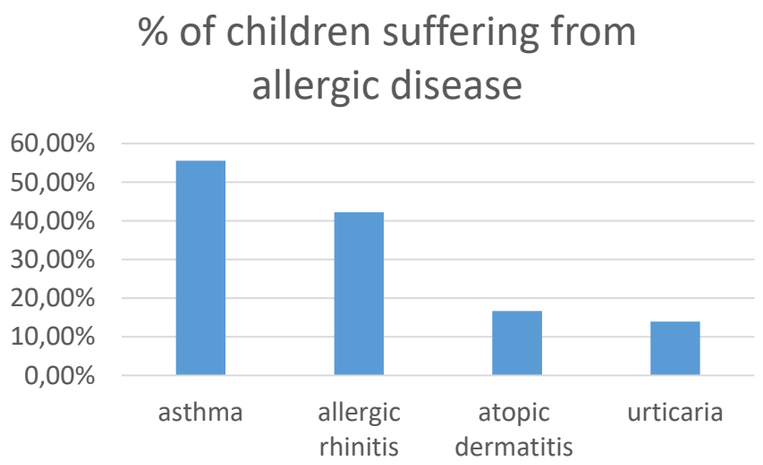
Method

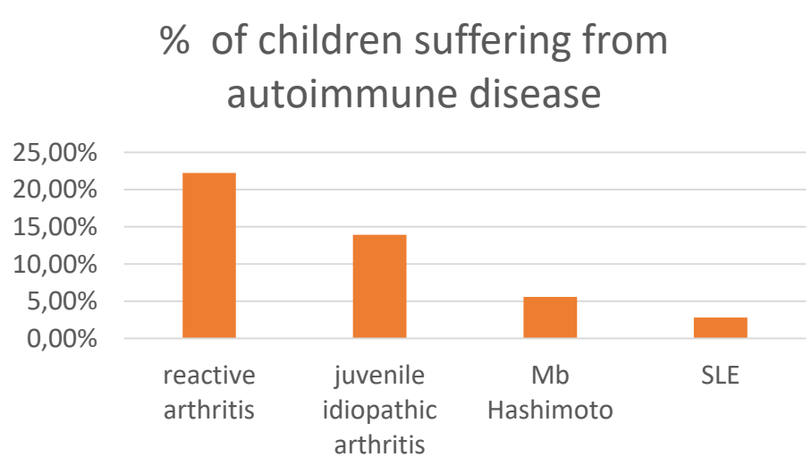
The study included 36 children diagnosed with IgA immunodeficiency. The presence of allergic and autoimmune disorders was evaluated by specialists of allergology, immunology, rheumatology and otorhinolaryngology.

Findings



22 (71,1%) children were male, mean age of patients was 10.5 years. Among the patients 31 (86,11%) had at least one allergic disease: 20 (55,55%) had asthma, 17 (47,22%) had allergic rhinitis, 6 (16,67%) had atopic dermatitis and 5 (13,89%) had urticaria. 14 children (38,89%) had at least one of the following autoimmune disorders: 8 (22,22%) had reactive arthritis, 5 (13,89%) had juvenile idiopathic arthritis, 2 (5,56%) had Mb Hashimoto and 1 (2,78%) had SLE.





Conclusion

The study showed that the main clinical manifestations in patients with IgA deficiency were asthma and allergic rhinitis. Results also show increased frequencies in other allergic and autoimmune diseases, compared to available data from general population.

References

1. Zhang J, van Oostrom D, Li J, Savelkoul HFJ (2021). Innate Mechanisms in Selective IgA Deficiency. Front Immunol. Apr 26;12:649112.
2. Shahin RY, Ali FHA, Melek NAN, Elateef IAA, Attia MY (2020). Study of Selective Immunoglobulin A Deficiency Among Egyptian Patients with Food Allergy. Cent Eur J Immunol. 45(2):184-188.
3. Bousquet J, Schünemann HJ, Togias A, Bachert C, Erhola M, Hellings PW, et al. (2020) Next-generation Allergic Rhinitis and Its Impact on Asthma (ARIA) Guidelines for Allergic Rhinitis Based on Grading of Recommendations Assessment, Development and Evaluation (GRADE) and Real-World Evidence. J Allergy Clin Immunol. 145:70–80.e3.
4. Erkoçoğlu M, Metin A, Kaya A, Özcan C, Akan A, Civelek E, Çapanoğlu M, Giniş T, Kocabaş CN (2017). Allergic and Autoimmune Disorders in Families with Selective IgA Deficiency. Turk J Med Sci. Apr 18;47(2):592-598.

DJEČJA BOLNICA SREBRNJAK