Geliş Tarihi / *Received*: 26.01.2011 • Kabul Tarihi / *Accepted*: 22.03.2011

A PATIENT WITH MYASTENIA GRAVIS AND ALLERGIC RHINITIS

MYASTENİA GRAVİS VE ALLERJİK RİNİTLİ BİR HASTA

İlknur BOSTANCI, Handan DUMAN, Serap ÖZMEN

Dr.Sami Ulus Kadın Doğum, Çocuk Sağlığı ve Hastalıkları Eğitim ve Araştırma Hastanesi, Çocuk Allerji ve Astım Kliniği

ABSTRACT

Myasthenia gravis is an autoimmune disorder of the neuromuscular junction. In most cases, auto antibodies that are formed against acetylcholine receptor (AChR) are the leading cause of the disease. Association of Myasthenia Gravis and allergic disorders is uncommon. Herein we report a patient with myasthenia gravis and allergic rhinitis.

Key Words: Allergic, rhinitis, atopic, Myastenia Gravis, prick test

Yazışma Adresi:
Dr. Handan Duman
Dr. Sami Ulus Kadın Doğum, Çocuk Sağlığı ve Hastalıkları Eğitim ve Araştırma Hastanesi, Ankara

e-mail: dumanhandan@yahoo.com

ÖZET

Myastenia Gravis nöromüsküler bileşkenin otoimmün hastalığıdır. Asetilkolin reseptörlerine (AChR) karşı gelişen otoantikorlar hastaların çoğunda saptanan en sık nedendir. Myastenia Gravisin allerjik hastalıklarla birlikteliği nadir bir durumdur. Biz burada myasthenia gravis ve allerjik riniti bulunan bir vakayı sunuyoruz.

Anahtar Kelimeler: Allerjik, rinit, atopik, myastenia gravis, prik test

INTRODUCTION

Myasthenia gravis (MG) is an autoimmune disorder of the neuromuscular junction (NMJ) (1). In most cases, auto antibodies directed towards the skeletal muscle acetylcholine receptor (AChR) was the leading cause of the disease. In non-AChR patients, other components of the postsynaptic muscle endplate might be the other targets of the disease (2). Association of allergic disorders and MG is uncommon. Herein we report a patient with myasthenia gravis and allergic rhinitis.

CASE

A 20-year-old boy with a history of ocular myasthenia gravis, referred to our allergy clinic for his nasal complaints. He was suffering from nasal blockage and itching during spring for the last five years. He had no history of cough, dispnea or wheezing. Besides he had no symptoms of conjunctivitis. His mother had a history of allergic asthma. At the age of 14, he suffered from ptosis at his left eye and diplopia. He diagnosed with ocular MG. Anti-acetylcholine receptor antibody was negative (0.1 nmol/L). Two years before he underwent thymectomy. The pathology revealed thymic hyperplasia. After surgery his complaints about myasthenia gravis were resolved. The patient was not taking any medication for MG after thymectomy.

Physical examination was normal except for allergic shiner and Dennie Morgan lines. On the chest auscultation there were no pathologic findings. A complete neurological exam revealed no abnormalities.

Laboratory tests including complete blood count and biochemical parameters were normal. The eosinophil count was 600/mm^3. Routine skin prick tests with aeroallergens were positive for grass pollen and also for cat and dog epithelia and negative for all other allergens tested (mites, moulds and latex). Total IgE was high (627 IU/ml). Lung function tests were at normal range.

DISCUSSION

The prevalence of childhood MG in Europe and North America is 10–15% of MG cases (3). It is much more common in Asian countries such as China. Disease onset age is under 15 years at 50% of patients, many with purely ocular manifestations (4). Consistent with literature, our country is at Asia and our patient diagnosed at the age of 14 with ocular manifestations.

In the literature one study indicated a significant association of allergic conjunctivitis with MG especially for ocular or seronegative MG in cases without thymoma (5). Our case was seronegative without thymoma but he had only nasal symptoms, no symptoms of conjuctivitis.

There is very limited data about association of MG with allergic disorders. Kai et al. reported a case with limb-girdle type myasthenia gravis and atopic dermatitis, whose symptoms of both disease improved after thymectomy (6). Recently a case of near fatal asthma associated with MG was published. They reported the patient's lung function test declined overall after administration of the bronchodilatator suggesting respiratory muscle weakness (7).

It is reported that there is an over expression of CD23 (the low affinity receptor for IgE) in the germinal centers of the thymus of MG patients (8). The CD23 receptor (FcεRII) plays an important role in IgE-related reactions, in the control of IgE synthesis (9). Thus, CD23 may be the common immunologic factor between MG and allergic disorders.

To the best of our knowledge our case was the only case that had myasthenia gravis and allergic rhinitis in the English literature.

In conclusion, there is limited data about association of MG and allergic rhinitis at the literature. There may be a common immunologic factor between them or it could be a random situation. In the light of this case we reviewed the literature.

REFERENCES

1. Drachman DB. Myasthenia gravis. N Engl J Med 1994;330(25):1797–810.
2. Patrick J, Lindstrom J. Autoimmune response to acetylcholine receptors. Science 1973; 180(88): 871–2.
3. Phillips LH. The epidemiology of myasthenia gravis. Ann N Y Acad Sci 2003; 998: 407–12.
4. Zhang X, Yang M, Xu J, Zhang M, Lang B, Wang W, et al. Clinical and serological study of myasthenia gravis in HuBei Province, China. J Neurol Neurosurg Psychiatry 2007;78(4): 386–90.
5. Murai H, Osoegawa M, Ochi H, Kira J. High frequency of allergic conjunctivitis in myasthenia gravis without thymoma. J Neurol Sci 2004; 225(1-2):27-31.
6. Kai Y, Ohyagi Y, Inoue I, Higashino T, Yamada T, Kira J. A patient with limb-girdle type myasthenia gravis and atopic dermatitis, both of which improved after thymectomy. Rinsho Shinkeigaku 2000;40(4):405-8.
7. Souza-Machado A, Ponte E, Cruz AA. Severe asthma associated with myasthenia gravis and upper airway obstruction. J Investig Allergol Clin Immunol 2007;17(4):267-70.
8. Murai H, Hara H, Hatae T, Kobayashi T, Watanabe T. Expression of CD23 in the germinal center of thymus from myasthenia gravis patients. J Neuroimmunol 1997;76(1-2):61-9.
9. Krogulska A, Wąsowska-Królikowska K, Polakowska E, Chrul S. Evaluation of Receptor Expression on Immune System Cells in the Peripheral Blood of Asthmatic Children Undergoing Food Challenges. Int Arch Allergy Immunol 2009;150(4): 377-88.