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Oral Presentation

Autoimmune Myasthenia Gravis Introduction, Immunopathogenesis and Classification

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Abstract

Autoimmune Myasthenia Gravis (MG) is a unique disease among all autoimmune disorders in two ways. First, there are a wide range of sub-specialties involved in the diagnosis and management of MG; secondly MG is an autoimmune disorder whose autoimmunity is well established. In this paper I will cover these topics: history and epidemiology of MG followed by a brief overview on physiology of neuromuscular junction (NMJ). Immunopathogenesis of MG is probably the most important goal of this article which describe the rule of immune dysregulation and NMJ inflammation in pathogenesis of MG. Finally, I am going to conclude the clinical aspects and serological classification of MG. The incidence rate of MG is estimated to be somewhere between 9 and 30 per 1000000 and the prevalence rate is estimated to be somewhere between 100 and 14 per 1000000. During last two decades both incidence and prevalence rates have been increased significantly. NMJ aperture has a very complicated structure which the action potential passes from motor nerve into the muscle membrane. From immunopathogenesis point of view, MG is actually characterized by reduction of total number of active Acetyl Choline Receptors (AChR) which leads to reduction in end plate potentials (EPPs) necessary for action potential generation of muscle. The reduction of AchR is caused by Abs which target AchRs primarily or other type of receptors which affect AchR consequentially (like MuSK, discovered in 2000 and LRP4 in 2011). Serological classification of MG is probably the most useful approach which helps the clinician to set up management and treatment strategies.

Keywords: Autoimmune, Potential, Management

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