

Frequency of Anti-Acetylcholine Receptor (AChR) antibody among suspected adult myasthenia gravis patients in Malaysia: A healthcare burden?

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ABSTRACT

Introduction: Myasthenia gravis (MG) is a chronic neuromuscular autoimmune disease, characterised by muscle weakness. It presents a significant healthcare burden particularly due to its impact on patients' quality of life and challenges in diagnosis and management. One of the diagnostic parameters for MG is the presence of anti-acetylcholine receptor (AChR) autoantibodies. **Objective:** The objective of this study is to evaluate the frequency of anti-AChR antibody in adult Malaysian MG-suspected patients. **Materials and Methods:** This is a retrospective study analysing the frequency of anti-AChR IgG antibody measured by enzyme-linked immunosorbent assay (ELISA) selected from our diagnostic database. Results equal to and above 0.5 nmol/L are considered positive. **Results:** About 71% (192/276) of seropositive patients are adults and 66% are in the working adult age (18-64 years). Additionally, 67.2% (129/192) of seropositive patients are in the prime working age (25-54 years). About 21% (27/129) from this group was diagnosed with ocular MG, with diplopia and ptosis the most commonly reported symptoms. Eight patients experienced MG crisis. Overall, a female predominance was also observed (60.9%) and there was a significant mean difference between males and females who were seropositive ($p < 0.05$). **Conclusion:** In this adult patient cohort, a high percentage of seropositivity was reported and patients presented with a wide range of debilitating symptoms, from numbness to difficulty of swallowing. Notably, women are also highly affected. Older women (30 years and above) were experiencing more chronic symptoms. Based on these observations, it is presumptive that quality of life is greatly affected. Adults are crucial for Malaysia's economic activity and contribute to the labour force and thus, disease like MG can pose a burden to the healthcare system. Nonetheless, other key measures such as co-morbidity index, type of treatment and duration of hospitalization of patients should be considered in future studies.

Keywords: Myasthenia Gravis, Neuromuscular, Autoimmune, Anti-Acetylcholine Receptor Antibody, ELISA