Does change in acetylcholine receptor antibody level correlate with clinical change in myasthenia gravis?

INTRODUCTION: The objective of this study is to determine if change in acetylcholine receptor antibody (AChR-ab) levels reflects change in clinical severity in patients with myasthenia gravis (MG).

METHODS: We reviewed results from a prospective trial in MG and from all 85 patients in an MG Clinic who had AChR-ab determinations performed at least twice by the same commercial laboratory.

RESULTS: Change in AChR-ab levels correlated only weakly with change in clinical severity. AChR-ab levels fell in 92% of patients who improved and in 63% who did not. A fall in AChR-ab level had a positive predictive value for clinical improvement of 83% and a negative predictive value of only 59%.

CONCLUSIONS: AChR-ab levels fell in almost all patients who improved, but also in most patients who did not. Thus, we do not recommend commercially available AChR-ab levels as a biomarker of improvement in MG. However, antibody levels might be useful as a marker for inadequate immunotherapy.
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