AB026. PS01.08. Acetylcholine receptor antibody levels correlate with clinical status in myasthenic thymomas and non-thymomas

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Background: There is no consensus about a correlation between clinical severity of disease and the levels of anti-acetylcholine receptor antibody (AChR) in patients with myasthenia gravis (MG). Previous research showed no association with a follow up for several months. The aim of this 5-year-retrospective study was to investigate the possible correlation between the patients' clinical symptoms and anti-AChR-levels measured with a specific quantitative immunoprecipitation assay (RIA).

Methods: We retrospectively analyzed 50 patients with MG, who were treated at the Maastricht University Medical Center. Inclusion criteria were defined based on positive anti-AChR-levels (>0.25 nmol/L) and the use of minimal one immunosuppressive therapy. The anti-AChR-levels were measured by RIA with serial serum dilutions (IBL, Germany). Clinical severity of disease was measured by using the Myasthenia Gravis Foundation of America (MGFA) protocol. We analyzed the MGFA-scores and anti-AChR-levels at onset of disease, and subsequently after 6 months, 1, 3 and 5 years.

Results: Of the 50 included patients, 28 underwent a sternal or robotic thymectomy before or during the follow up. Pathological results showed 10 thymomas (20%). The mean anti-AChR-levels and the mean MGFA-score of the 50 patients significantly decreased continuously during follow up in both thymomas (P=0.025) and non-thymomas (P=0.011). No significantly differentiation in decrease of titer levels and MGFA was measured between thymomas and non-thymomas. A drop of 25% and 50% of the anti-AChR-levels was measured at a mean time of 21 and 32 months respectively.

Conclusions: The correlation coefficient r =0.98 was found between clinical severity of disease and the decrease of anti-AChR levels in MG patients with both thymomas and non-thymomas. No significantly differentiation in decrease of titer levels and MGFA was measured between thymomas and non-thymomas. On average it took more than 2 years to achieve a 50% reduction of anti-AChR-levels. Anti-AChR-levels are useful as a marker for the evaluation of immunotherapy and have to be followed for several years.

Keywords: Myasthenia gravis (MG); thymomas; acetylcholine receptor antibody levels

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