

Anti-complement therapy in myasthenia gravis: a single center real life experience

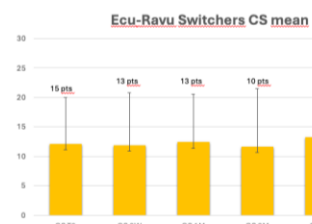
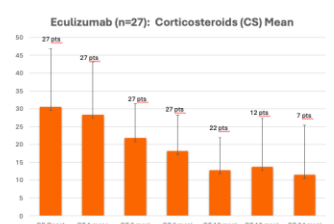
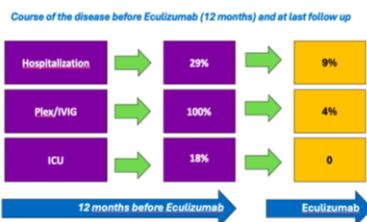
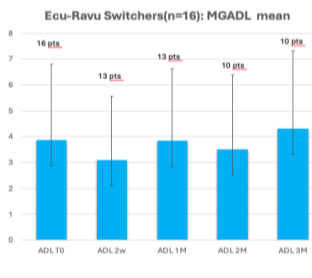
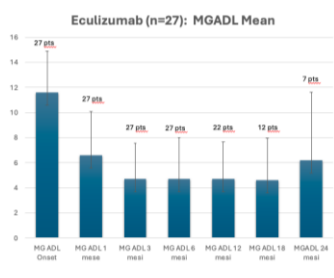
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Background and objectives

Complement protein C5 inhibitors, such as eculizumab, ravulizumab and zilcuoplan, have been proved effective and safe for treatment of patients with anti-acetylcholine receptor-positive (AChR+) generalized myasthenia gravis (gMG) in phase 3 clinical trials and subsequent real world evidences. The aim of this study was to assess efficacy of such molecules in a single center real world setting and to describe clinical outcome of patients transitioning from eculizumab to ravulizumab.

Materials and methods

A retrospective analysis was conducted on patients with gMG treated with C5 inhibitors between November 2022 and May 2025 at the Cardarelli Hospital in Naples. Clinical assessment through specific scales (MG ADL - QMG) was performed after one, three, six, twelve and twenty-four months. Responders' frequency (defined as a MGADL reduction of at least 3 points) and changes in concomitant medications were also evaluated, along with number of significant exacerbations requiring or not rescue therapy.



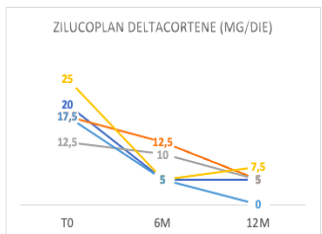
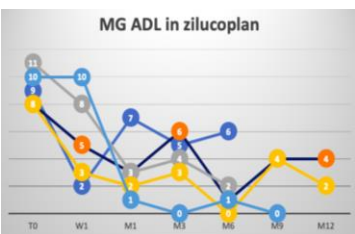
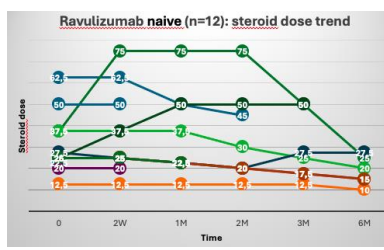
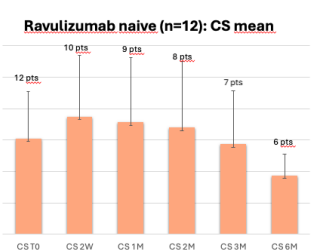
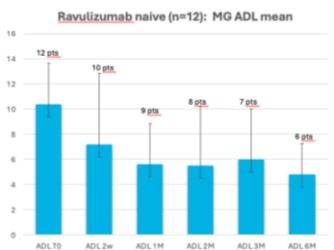
Results

Fourty-four gMG patients were included: 27 treated with eculizumab (all refractory patients, 16F/11M, mean gMG onset age 44±17 years, mean disease duration 10±4 years, mean follow up 16,9±7 months, max 30, min 5 months), 12 with ravulizumab (6F/6M, mean gMG onset age 53±17 years, mean disease duration 5,6±5 years, mean follow up 5,5±4 months with max 15, min 2 months) and 5 with zilcuoplan (5F/0M, mean gMG onset age 45±13 years, mean disease duration 13±6 years, mean

follow up 6±1 months with max 8, min 4 months). Sixteen patients were switched from eculizumab to ravulizumab ("switch group", mean duration of eculizumab therapy at switch 15,7±6 months).

MG-ADL and QMG scores showed a significant decrease at all timepoints with respect to baseline ($p < 0.001$) for all three drugs. At last follow up available, responders were 86% for eculizumab, 84% for ravulizumab and 100% for zilcuoplan. One ravulizumab non responder switched to eculizumab and another to efgartigimod with success. At last follow up, tapering of prednisone daily dosage was possible in 82% of patients for eculizumab, 75% of patients for ravulizumab and 100% for zilcuoplan.

In the switch group, no significant MGADL variation from baseline was recorded and 92% of patients kept favorable response and tolerability. Only one patient sus pended zilcuoplan because he developed morphea.



Discussion and conclusions

In clinical setting, eculizumab, ravulizumab and zilcuoplan were effective in improving symptoms in AChR+ gMG patients and switching from eculizumab to ravulizumab showed to be effective for refractory AChR+ gMG patients in clinical settings. Steroid sparing effect was recorded in all the three pharmacological groups.

