

EFFECT OF ANTI-CGRP MONOCLONAL ANTIBODIES ON ANXIETY AND MOOD DISORDERS IN MIGRAINEURS

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Background and aims: Migraine is frequently associated with psychiatric comorbidities, such as anxiety and mood disorders, most prominently in subjects with chronic and refractory headache. Anti-Calcitonin Gene Related Peptide (CGRP) medications are known to be safe and effective in reducing monthly migraine days (MMDs) and disability in these patients¹. This study aims to assess the effect of such therapy on anxiety and mood disorders.

Methods: 58 patients were consecutively enrolled. A set of neuropsychological tests (BDI-II, HADS, Zung) was administered before the start of anti-CGRP therapy (t0), after six months (t6) and after 12 months (t12). 24 subjects dropped out of the study; the remaining 34 completed the scheduled testing. Of these, 11 patients were on antidepressant medications due to known mood disorders; that treatment was not modified during the study. No other interventions were performed on that matter (such as psychotherapy or psychological support). Psychological scales were correlated with MMDs and disability score (MIDAS). Statistical analysis was then performed using non-parametric tests.

Results: Our data showed that anti-CGRP therapy reduces anxiety and depressive symptoms in migraineurs. The BDI-II scale was the most consistent with the improvement reported by the patients and showed a statistically significant reduction after 12 months of treatment (14.9 vs 9.2, $p < 0.01$). The HADS scale was more accurate at detecting an improvement in anxiety symptoms (8.3 vs 6.3, $p < 0.01$), while it failed at reaching statistical significance on depressive symptoms. The Zung scale showed a coherent trend that did not reach statistical significance. Tests at t6 did not show statistically significant differences. No linear correlation was found between psychological scales and MMDs or MIDAS.

Discussion: Our data suggests that anti-CGRP therapy improves both disability and psychiatric symptoms associated with migraine. Reduction in disability and psychological scores does not correlate linearly with MMDs. BDI-II seems to be a good scale to assess mood disorders in migraineurs, while HADS might be better at assessing anxiety symptoms. More research is needed to confirm these findings.

References

1. Quintana, S., Russo, M., Manzoni, G.C. *et al.* Comparison study between erenumab, fremanezumab, and galcanezumab in the preventive treatment of high frequency episodic migraine and chronic migraine. *Neurol Sci* 43, 5757–5758 (2022). <https://doi.org/10.1007/s10072-022-06254-x>

