EPTINEZUMAB FOR THE PREVENTIVE TREATMENT OF MIGRAINE: REAL-WORLD DATA FROM THE NEUROLOGY DEPARTMENT OF THE ATHENS NAVAL HOSPITAL IN GREECE

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ABSTRACT

Background: Eptinezumab is the first anti-CGRP monoclonal antibody administered intravenously for migraine prevention. **Objective:** To evaluate the effectiveness and safety of eptinezumab in patients with episodic and chronic migraine during the first trimester of treatment in a real-world clinical setting. **Methods:** Seven patients received eptinezumab 100 mg intravenously. Baseline and 3-month assessments included monthly migraine days (MMDs), pain intensity, days of acute medication use and quality of life indices (HIT-6, MIDAS). **Results:** The cohort comprised six women and one man, mean age 40 years, mean migraine onset at 24 years. Five had episodic migraine without aura, one episodic migraine with aura, and one chronic migraine. All had failed at least two previous preventive treatments. At baseline, patients reported a mean of 10 MMDs, pain intensity 9/10, 15 days of acute medication use/month, mean MIDAS score 36 and HIT-6 score 70 (severe disability). After 3 months of treatment, MMDs decreased by 60% (mean 4 days), pain intensity to 4/10, and acute medication days by 75% (mean 4 days). MIDAS improved to 8 and HIT-6 to 44 (mild/none disability). No adverse events were observed. **Conclusions:** Eptinezumab was effective and well tolerated, substantially reducing migraine frequency, pain intensity, and acute medication use, while improving quality of life. Its intravenous administration and bioavailability may provide clinical advantages.

Keywords: migraine, eptinezumab, CGRP, prophylaxis, real-world evidence

Η ΕΠΤΙΝΕΖΟΥΜΑΜΠΗ ΣΤΗΝ ΠΡΟΛΗΠΤΙΚΗ ΘΕΡΑΠΕΙΑ ΤΗΣ ΗΜΙΚΡΑΝΙΑΣ: ΕΜΠΕΙΡΙΑ ΑΠΟ ΤΗΝ ΝΕΥΡΟΛΟΓΙΚΗ ΚΛΙΝΙΚΗ ΤΟΥ ΝΑΥΤΙΚΟΥ ΝΟΣΟΚΟΜΕΙΟΥ ΑΘΗΝΩΝ

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ΠΕΡΙΛΗΨΗ

Εισαγωγή: Η επτινεζουμάμπη είναι το πρώτο μονοκλωνικό αντίσωμα κατά του CGRP που χορηγείται ενδοφλεβίως για την πρόληψη της ημικρανίας. **Σκοπός:** Η αξιολόγηση της αποτελεσματικότητας και της ασφάλειας της επτινεζουμάμπης κατά το πρώτο τρίμηνο θεραπείας σε ασθενείς με επεισοδιακή και χρόνια ημικρανία σε πραγματικές κλινικές συνθήκες. **Μέθοδοι:** Επτά ασθενείς έλαβαν 100 mg επτινεζουμάμπης ενδοφλεβίως και αξιολογήθηκαν πριν και μετά το τέλος του πρώτου τριμήνου αγωγής ως προς τις ημέρες ημικρανίας ανά μήνα (MMDs), την ένταση πόνου, τις ημέρες χρήσεις φαρμάκων οξείας φάσης/μήνα και με βάση δείκτες ποιότητας ζωής (HIT-6, MIDAS). **Αποτελέσματα:** Το δείγμα περιλάμβανε έξι γυναίκες και έναν άνδρα (μέση ηλικία: 40 έτη· μέση ηλικία έναρξης ημικρανίας: 24 έτη). Πέντε είχαν επεισοδιακή ημικρανία χωρίς αύρα, ένας επεισοδιακή ημικρανία με αύρα και ένας χρόνια ημικρανία. Όλοι είχαν αποτύχει σε ≥2 προηγούμενες προφυλακτικές θεραπείες. Προ της χορήγησης του φαρμάκου, οι ασθενείς ανέφεραν κατά μέσο όρο 10 MMDs, ένταση πόνου 9/10, 15 ημέρες χρήσης οξέων φαρμάκων/μήνα, μέση βαθμολογία MIDAS 36 και HIT-6 70 (σοβαρή αναπηρία). Μετά από 3 μήνες, οι MMDs μειώθηκαν κατά 60% (μέσος όρος 4 ημέρες), η ένταση του πόνου σε 4/10 και οι ημέρες χρήσης οξέων φαρμάκων κατά 75% (μέσος όρος 4 ημέρες). Η βαθμολογία MIDAS βελτιώθηκε σε 8 και η HIT-6 σε 44 (ήπια/καμία αναπηρία). Δεν παρατηρήθηκαν ανεπιθύμητες ενέργειες. **Συμπεράσματα:** Σε αυτό το πραγματικό κλινικό δείγμα, η επτινεζουμάμπη ήταν

ΕΛΛΗΝΙΚΗ ΝΕΥΡΟΛΟΓΙΚΗ ΕΤΑΙΡΕΙΑ

αποτελεσματική και καλά ανεκτή, μειώνοντας σημαντικά τη συχνότητα των κρίσεων, την ένταση του πόνου και τη χρήση φαρμάκων οξείας φάσης, ενώ βελτίωσε την ποιότητα ζωής. Η ενδοφλέβια χορήγησή του και η πλήρης βιοδιαθεσιμότητα ενδέχεται να προσφέρουν κλινικά πλεονεκτήματα.

Λέξεις-κλειδιά: ημικρανία, επτινεζουμάμπη, CGRP, προφύλαξη, δεδομένα πραγματικού κόσμου

INTRODUCTION

Migraine is a debilitating and prevalent neurological disorder worldwide and remains inadequately controlled in many patients due to limited efficacy or poor tolerability of conventional preventive medications.[4]

Monoclonal antibodies targeting the calcitonin gene–related peptide (CGRP) pathway have transformed migraine prophylaxis.[4] Among these, eptinezumab is the first administered intravenously, offering immediate and complete bioavailability, and has demonstrated rapid onset and sustained efficacy in phase-III trials, including PROMISE-1 and PROMISE-2.[2-3] A recent meta-analysis confirmed its effectiveness and safety across episodic and chronic migraine.[2] Real-world evidence, including multi-site observational studies, has begun to reflect these benefits in broader patient populations.[1,7,9,11]

In this study, we present real-world clinical experience from Greece with eptinezumab in patients with episodic and chronic migraine treated at the Athens Naval Hospital, assessing its clinical impact and tolerability.

METHODS

Study design and setting

Single-centre, observational, prospective cohort study at the Neurology Department of the Athens Naval Hospital.

Participants

Seven adults with migraine (episodic or chronic), fulfilling ICHD-3 criteria, were included. All patients had failed at least two previous preventive therapies. Prior to data collection, all participants were required to read and sign an informed consent form, confirming their agreement to confidentiality, anonymity, and their right to withdraw from the study at any time.

Intervention

Eptinezumab 100 mg was administered intravenously once every 3 months.

Outcomes

Patient-reported outcome measures were assessed at baseline and after 3 months:

- Monthly migraine days (MMDs)
- Pain intensity (0–10 scale)
- Days of acute medication use per month
- Headache Impact Test (HIT-6)
- Migraine Disability Assessment (MIDAS)
- Safety

Adverse events were monitored during infusion and throughout follow-up.

RESULTS

Seven patients were included in the study, six women and one man, with a mean age of 40 years. The mean age at migraine onset was 24 years. Five patients had episodic migraine without aura, one had episodic migraine with aura, and one had chronic migraine. All patients had previously failed at least two preventive treatment options.

At baseline, the clinical burden was substantial. Patients reported a mean of 10 monthly migraine days (MMDs), with a mean pain intensity of 9 on a 10-point scale. The mean number of days of acute medication use was 15 per month. Disability indices reflected a high level of impact, with a mean MIDAS score of 36 and a mean HIT-6 score of 70, both consistent with severe disability (**Table 1**).

After three months of treatment with eptinezumab 100 mg, significant clinical improvements were observed. The mean number of monthly migraine days was reduced by 60%, from 10 to 4 days. Pain intensity decreased from a mean of 9/10 to 4/10. The number of days of acute medication use per month was reduced by 75%, from 15 to 4. Quality-of-life indices showed marked improvement: the mean MIDAS score decreased from 36 to 8, and the mean HIT-6 score from 70 to 44, reflecting a shift from severe to mild or no disability. Importantly, no adverse events were reported during the infusion or the subsequent three-month follow-up period (**Table 2**).

These results echo findings from phase-III trials and confirm significant reductions in MMDs and disability scores.[2-3] They align with real-world evidence reporting effectiveness even in complex patients, including prior non-responders to other CGRP antibodies.[1,7,9]

Table 1. Baseline characteristics of the study cohort (n = 7).

Variable	Value
Sex, n (%)	Female: 6 (86%), Male: 1 (14%)
Mean age, years (range)	40 (32–49)
Mean age at migraine onset	24 years
Migraine type, n (%)	Episodic without aura: 5 (71%) Episodic with aura: 1 (14%) Chronic migraine: 1 (14%)
Previous preventive failures	≥ 2 in all patients (100%)
Baseline monthly migraine days (MMDs)	10 ± 2
Baseline pain intensity (0–10)	9 (severe)
Baseline acute medication days/month	15 ± 3
Baseline MIDAS score (mean)	36 (severe disability)
Baseline HIT-6 score (mean)	70 (severe disability)

Table 2. Clinical outcomes before and after 3 months of eptinezumab treatment (n = 7).

Outcome measure	Baseline (mean ± SD)	3 months (mean ± SD)	% Change / Absolute Change
Monthly migraine days (MMDs)	10 ± 2	4 ± 1	↓ 60% (–6 days)
Pain intensity (0–10 scale)	9 ± 1	4 ± 1	↓ 56% (–5 points)
Acute medication days/ month	15 ± 3	4 ± 1	↓ 75% (–11 days)
MIDAS score	36 ± 5	8 ± 3	↓ 78% (–28 points)
HIT-6 score	70 ± 4	44 ± 3	↓ 37% (–26 points)

DISCUSSION

This real-world case series provides real-world evidence from Greece on the use of eptinezumab for migraine prevention. The results demonstrate a clinically meaningful reduction in monthly migraine days, pain intensity, and acute medication use, accompanied by marked improvements in disability scores as measured by HIT-6 and MIDAS. Importantly, no adverse events were reported, confirming the favourable safety profile observed in pivotal clinical trials.[2-3]

Our findings are consistent with data from the PROMISE-1 and PROMISE-2 trials, which established the efficacy of eptinezumab in episodic and chronic migraine, respectively.[2-3] In those randomized controlled trials, reductions of 50–60% in monthly migraine days were observed, along with improvements in patient-reported outcomes. The degree of improvement in our patients—60% reduction in MMDs and 75% reduction in acute medication use—is in line with these results and highlights the reproducibility of efficacy in real-world settings.[8,9,11]

A notable strength of our series is that all included patients had previously failed at least two preventive therapies, yet eptinezumab produced substantial clinical benefits. This underscores the role of anti-CGRP therapies, and specifically eptinezumab, in populations with high unmet clinical need. Additionally, the improvement in both pain intensity and disability measures suggests that eptinezumab's benefit extends beyond reducing attack frequency, to alleviating the overall disease burden and improving quality of life. [1,4]

The intravenous administration of eptinezumab is a unique feature compared with other monoclonal antibodies targeting the CGRP pathway. Intravenous delivery ensures immediate systemic availability and 100% bioavailability, which may contribute to the rapid onset of effect observed as early as day one in clinical trials. This is particularly relevant for patients with high-frequency attacks or severe disability, in whom early benefit may improve adherence and satisfaction with treatment. Moreover, the lack of cytochrome P450 metabolism reduces the risk of

pharmacokinetic drug–drug interactions, making it an attractive option for patients with comorbidities and polypharmacy.[5,7]

Despite these encouraging results, several limitations must be acknowledged. The small sample size limits the generalisability of our findings, and the short follow-up period precludes conclusions regarding long-term efficacy and safety. In addition, the open-label, uncontrolled nature of the study may introduce bias. Larger prospective studies and registry data will be essential to further define the real-world role of eptinezumab in different migraine subpopulations, including those with medication-overuse headache or comorbid psychiatric disorders. Larger, multicentre prospective registries and comparative studies—including onabotulinumtoxin A comparisons—are needed.[3,6,10]

Nevertheless, the magnitude of benefit observed in this initial experience is clinically significant and suggests that eptinezumab may represent an important addition to the preventive treatment options for migraine in Greece. Early real-world data such as ours are essential to complement randomised trial evidence, as they reflect patient populations and healthcare systems encountered in daily practice.

CONCLUSIONS

Eptinezumab is a safe, effective preventive therapy for episodic and chronic migraine, with robust improvements in clinical and patient-reported outcomes. Larger studies are needed to confirm these promising findings and to directly compare efficacy with other anti-CGRP monoclonal antibodies.

CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

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REFERENCES

[1] Argoff C, Herzog SP, Smith RM, et al. Real-world effectiveness and satisfaction with intravenous eptinezumab treatment in patients with chronic migraine: REVIEW, an observational, multi-site, US-based study. J Headache Pain. 2024 Apr 25;25(1):65.

[2] Ashina M, Saper J, Cady R, et al. Eptinezumab in episodic migraine: A randomized, double-blind, placebo-controlled study (PROMISE-1). Cephalalgia. 2020 Mar;40(3):241-54.

[3] Lipton RB, Goadsby PJ, Smith J, et al. Efficacy and safety of eptinezumab in patients with chronic migraine: PROMISE-2. Neurology. 2020 Mar 31;94(13): e1365-e1377.

[4] Siahaan YMT, Hartoyo V, Hariyanto TI. Efficacy and safety of eptinezumab as preventive treatment for episodic/chronic migraine: A systematic review and meta-analysis. Clin Exp Pharmacol Physiol. 2022 Nov;49(11):1156-68.

[5] Kudrow D, Cady RK, Allan B, et al. Long-term safety and tolerability of eptinezumab in patients with chronic migraine: a 2-year, open-label, phase 3 trial. BMC Neurol. 2021 Mar 19;21(1):126.

[6] Overeem LH, Raffaelli B, Mecklenburg J, et al. Indirect Comparison of Topiramate and Monoclonal Antibodies Against CGRP or Its Receptor for the Prophylaxis of Episodic Migraine: A Systematic Review with Meta-Analysis. CNS Drugs. 2021 Aug;35(8):805-20.

[7] Buse DC, Versijpt J, Diener HC. Disrupting Migraine Dynamics: A Narrative Review of the Consequences of Modern Anti-CGRP Monoclonal Antibody Therapies. Neurol Ther. 2025 Aug;14(4):1185-96.

[8] Bellotti A, Podella C, Sarchielli P. Effectiveness and safety of eptinezumab in anti-CGRP(R) mAbs-naïve and mAbs-non responders' patients: A retrospective observational study. Cephalalgia Reports. 2025;8.

[9] Zhao YJ, Ong JJY, Sonu SK, et al. A real-world prospective observational study of eptinezumab in Asian patients with migraine. Headache. 2024 Jul-Aug;64(7):810-24.

[10] Scuteri D, Pagliaro M, Iannacchero R, et al. Comparing eptinezumab with onabotulinumtoxinA in the treatment of chronic migraine: a real-world evidence study. J Headache Pain. 2025 Jul 14;26(1):159.

[11] Barbanti P, Orlando B, Egeo G, et al. Evaluating the Effectiveness, Tolerability, and Safety of Eptinezumab in High-Frequency and Chronic Migraine in Real World: EMBRACE-The First Italian Multicenter, Prospective, Real-Life Study. Brain Sci. 2024 Jun 30;14(7):672.