




# PAIN RELIEF AFTER 30 MINUTES PREDICTS COMPLETE ACUTE TREATMENT SUCCESS AT 12 HOURS: A REAL-WORLD ANALYSIS OF INTRAVENOUS EPTINEZUMAB INFUSION IN HIGHLY REFRACTORY MIGRAINE PATIENTS

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**Background.** Eptinezumab is the intravenous anti-CGRP monoclonal antibody approved for the prevention of episodic and chronic migraine. Data from the RELIEF and the BE-FREE studies demonstrated its rapid onset of action. The BE-FREE is an ongoing Italian observational, prospective, multicenter, real-world study exploring the very early changes in migraine pain intensity and associated symptoms from 30 minutes (T30) to 48 hours after eptinezumab infusion, when an acute migraine attack is ongoing.In this analysis of the BE-FREE study we evaluated whether a very early pain intensity reduction predicts the 12 hours (T12) treatment success.

**Methods.** We evaluated 22 patients undergoing eptinezumab infusion (100 mg or 300 mg) during an acute migraine attack. Baseline (T0) data included socio-demographic and clinical variables as diagnosis, monthly migraine days (MMDs), presence of Medication Overuse Headache (MOH), headache pain intensity (Numeric Rating Scale, NRS) and previous failed preventives. We also analyzed the time interval between the onset of the migraine attack and the infusion. Painkillers were prohibited in the previous 24 hours.For this analysis we focused on the variation of NRS score at T30, accordingly patients were classified as: i) Rapid Responders (RRs) defined as those with a >50% NRS reduction at T30, ii) Delayed Responders/Non-Responders (DRs) those without. The NRS variation from T0 to T12 in the 2 groups was also evaluated. Statistical comparisons of NRS score at T12 was performed using the non-parametric Mann-Whitney U test.

**Results.** The cohort (n=22, 86.4%F, median age of 43.3, SD15 years) presented a highly refractory clinical profile, with a baseline MMDs of 20.0 (IQR: 15-30), a mean of 4.8 prior preventive treatment failures, a high prevalence of chronic migraine (72.7%) and 59% of MOH. Data were collected at different eptinezumab infusions, mainly at I infusion (15 patients, 68.2%); the attack had started 3.9 ± 2 h before the infusion. Eptinezumab was administered at a dose of 100 mg in 17 patients (77.3%) and of 300 mg in 5 patients (22.7%). At 30 minutes, 7 patients (31.8%) achieved a > 50% pain reduction and were classified as RRs. Strikingly, at 12 hours, 100% of RRs (7/7) achieved a complete pain-free status (NRS = 0). In contrast, the DR group (N=15) exhibited a slower, heterogeneous recovery, with a mean NRS of 3.7 at 12 hours. The RRs experienced a significantly lower pain intensity from T0 to T12 (p = 0.0244) and a significantly greater absolute pain reduction at 12 hours (p = 0.0417), with an average decrease of 5.86 points vs 2.57 points in DRs. Eptinezumab dosage (100 mg vs 300 mg) did not correlate with the very early response at 30 minutes.

**Conclusions.** These findings suggest that in highly refractory migraine patients undergoing eptinezumab treatment during a migraine attack, a NRS score reduction of >50% within 30 minutes of infusion is not merely an indicator of immediate relief but may be a prognostic marker predicting a complete pain-free status at 12 hours.

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