

Low-Dose Outpatient Ketamine Infusion Protocol for Chronic Neuropathic Pain: A Retrospective Safety and Efficacy Analysis

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Introduction

Ketamine infusion therapy is increasingly utilized for treatment-resistant neuropathic pain, yet optimal dosing protocols balancing efficacy and safety remain unclear. This study evaluates a standardized low-dose outpatient ketamine infusion protocol's impact on pain relief and adverse event rates in a community-based pain practice.

Case Description

A retrospective review was conducted of 60 adult patients with chronic neuropathic pain (CRPS, postherpetic neuralgia, or peripheral neuropathy) who received low-dose ketamine infusions (0.3–0.5 mg/kg over 2–4 hours) between January and December 2024.

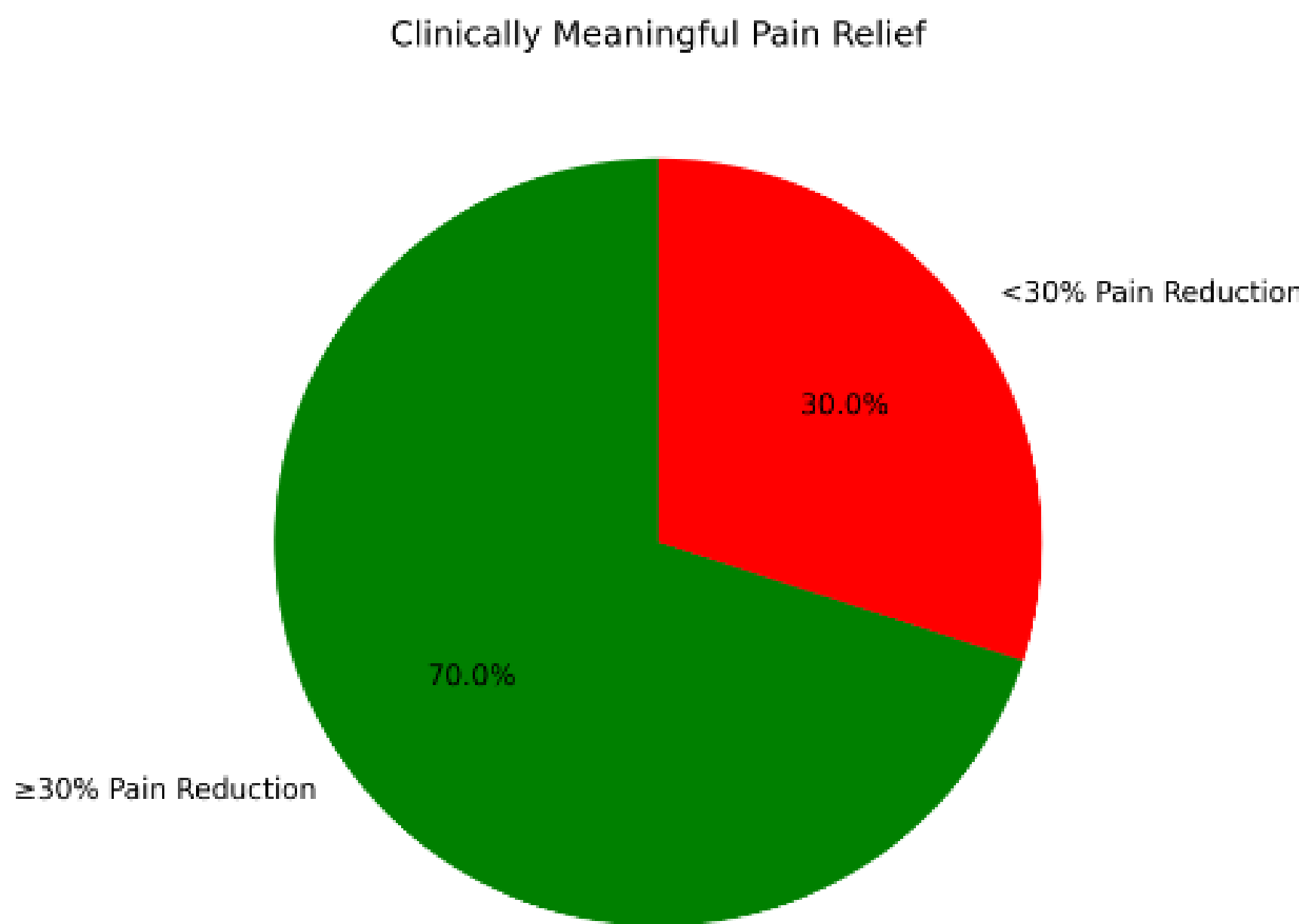
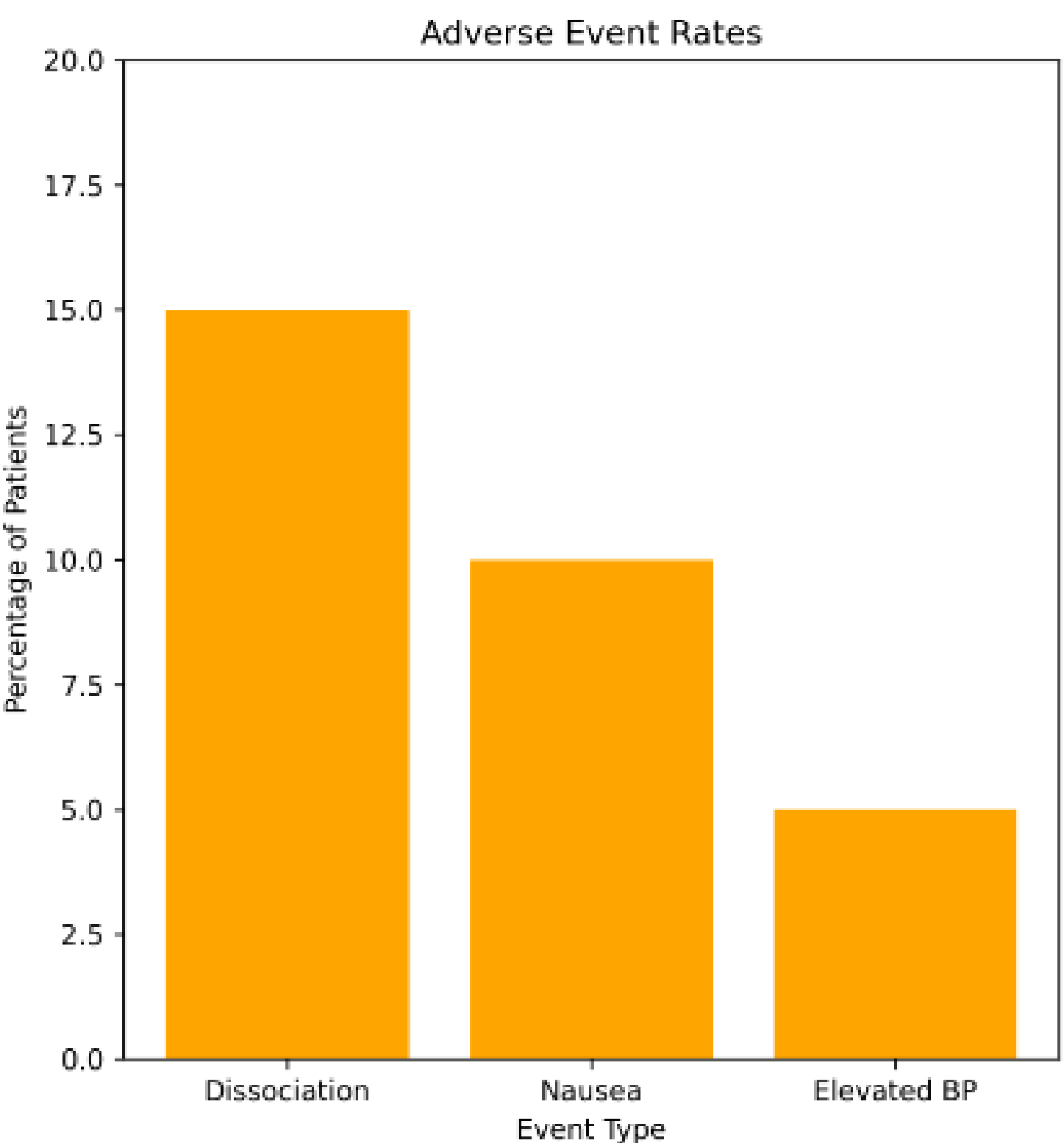
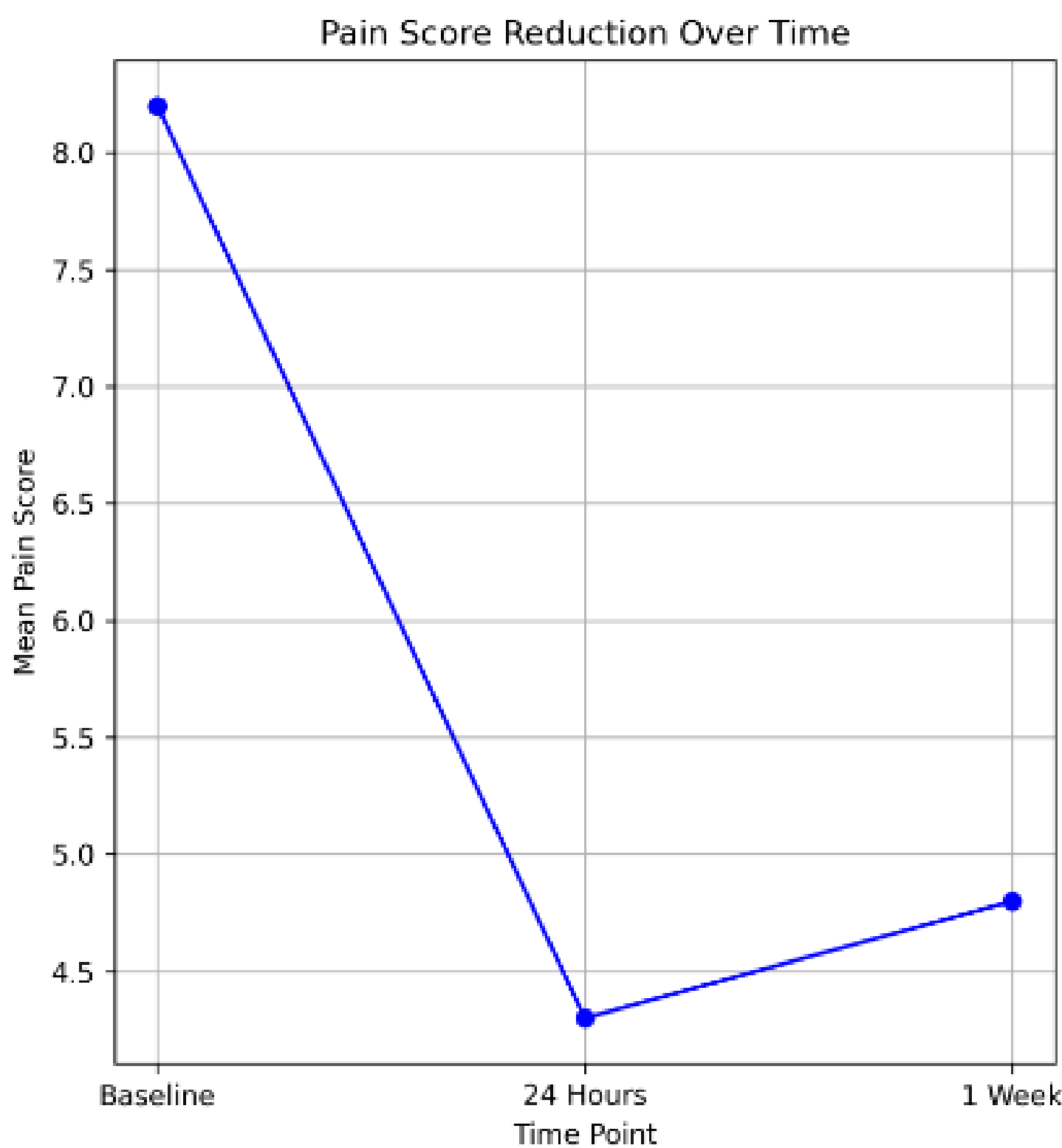
- Primary outcomes: Pain score reduction (Numerical Rating Scale, NRS) at 24 hours and 1 week post-infusion.
- Secondary outcomes: Incidence of psychomimetic side effects, hemodynamic instability, and need for rescue medications.
- Statistical analysis: Paired t-tests and chi-square comparisons.

Results

- Mean baseline NRS pain score decreased from 8.2 ± 1.0 to 4.3 ± 1.2 at 24 hours and 4.8 ± 1.3 at 1 week ($p < 0.001$).
- Clinically meaningful pain relief ($\geq 30\%$ reduction) was achieved in 70% of patients.
- Adverse events were mild and transient: dissociation (15%), nausea (10%), and elevated blood pressure (5%), with no serious complications or hospital admissions.

Discussion

This low-dose ketamine infusion protocol provided significant short-term pain reduction with a favorable safety profile in outpatient settings. Findings support broader adoption of standardized low-dose protocols and pave the way for future prospective studies to define long-term efficacy.



Conclusions

Standardized low-dose outpatient ketamine infusions are effective and safe for chronic neuropathic pain, achieving meaningful pain relief for most patients with minimal adverse effects. Further research is needed to establish long-term outcomes.

Contact

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