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Scientific Abstracts &gt; Chronic Pain

# Transition to Memantine after IV Ketamine infusion for chronic pain. A Retrospective study

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## Introduction

Intravenous ketamine has been widely utilized for the management of chronic pain. Memantine, an oral agent that shares the NMDA receptor antagonist properties with ketamine, has demonstrated analgesic effects in preclinical models and small-scale clinical studies. Therefore, we aimed to evaluate the efficacy of oral Memantine compared to intravenous ketamine.

## Materials and Methods

We performed a retrospective chart review of all patients who underwent Ketamine infusion followed by oral Memantine at our institution from 2000 to 2022 (N=140). Data collected included demographic details (age, gender, primary diagnoses), Visual Analog Scale (VAS) scores, Hospital Anxiety and Depression Scale (HADS) scores, Patient Health Questionnaire-9 (PHQ-9) scores, and reported side effects. VAS scores were collected at baseline before treatment, 1 hour after IV Ketamine, and 1 month after oral Memantine. These scores were compared and analyzed.

## Results/Case Report

Out of 140 patients, the success rate defined as 50% or more decrease in VAS scores for IV ketamine was (98.6%) compared to oral Memantine (25.7%) p-value. The average percentage change in VAS scores was 65.6% for ketamine compared to 29.3% for memantine ( $p < 0.001$ ). Different types of pain, including neuropathic pain, CRPS, and radicular pain, did not exhibit varying responses. Notably, Ketamine was effective in controlling pain regardless of depression and anxiety scores. In contrast, Memantine's effectiveness diminished with higher depression and anxiety scores. Nausea was the most common side effect, affecting 5 patients (3.6%), followed by dizziness in 3 patients (2.1%). ( $p < 0.001$ ).

## Discussion

oral Memantine did not demonstrate significant pain control when compared to intravenous Ketamine. Patients with lower depression or anxiety scores may be better candidates for oral Memantine. Further research is recommended to identify if a specific patient subset would have a favorable response.

## References

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## Disclosures

No

## Tables / Images