Intravenous Ketamine for Cancer Pain Management Including Flares During the COVID-19 Pandemic: A Retrospective Study

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- PMID: 34086927

Pain Med:. 2021 Jun 4;pnab163.
doi: 10.1093/pm/pnab163. Online ahead of print.

- DOI: 10.1093/pm/pnab163

Abstract

Objectives: Cancer-related neuropathic pain (CNP) affects an increasing proportion of cancer patients given improved survival but remains difficult to treat. There are no studies on an extended intravenous (IV) ketamine protocol and its synergies with common neuropathy treatments to treat CNP. This study aims to (1) evaluate the safety and effectiveness of an IV ketamine protocol to treat refractory CNP and (2) uncover synergies between ketamine and common neuropathy treatments.

Methods: This is a single-center, retrospective review of 57 patients and 192 infusions with prospective follow-up on fourteen enrolled patients during the COVID-19 pandemic.

Results: The etiologies of CNP were 13 from tumor compression, 25 with chemotherapy-induced peripheral neuropathy, 13 from surgery, and 6 from radiation therapy. Overall, 42 out of 57 patients (73.7%) were responders. 71.8% of responders received >3 weeks of pain relief on their last infusion. Analysis of adjuvant treatments revealed the combination of serotonin-norepinephrine reuptake inhibitors (SNRI) and ketamine resulted in an increase in responders compared to non-responders ($p < 0.01$). Adverse events occurred in 32 of 192 infusions (16.7%). All side-effects self-resolved or resolved with intervention per the adverse events protocol. During the pandemic, all fourteen currently enrolled patients did not receive ketamine infusions. Thirteen of the fourteen patients returned to baseline pain with 61.5% increasing medications. All experienced worsened function, mobility, mood, and/or anorexia.

Conclusion: IV ketamine may be a safe and effective adjuvant treatment for CNP, especially with SNRIs. Larger, prospective studies are warranted and should explore parameters to help prognosticate response to ketamine infusions.

Keywords: analgesic; cancer pain; ketamine; neuropathic pain; synergy.

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