



## **Ketamine therapy: a promising option for patients with chronic non-malignant pain**

NEWS

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Ketamine is a short acting general anesthetic used by medical practitioners and veterinarians. It can be administered by different routes: oral, rectal, intramuscular, intravenous and topical. Recently, a research study was conducted to evaluate the effectiveness and adverse effects of subcutaneous ketamine infusions and sub lingual ketamine lozenges in treating chronic non-malignant pain. Data was collected from 70 patients, who were admitted in an academic, tertiary care hospital from 2007 to 2012 and received sub anesthetic, subcutaneous ketamine infusion between 3 and 7 days.

Data collected from the patients was evaluated for efficacy, safety and decrease in the use of opioids. After analyzing data, it was found that the pain intensity was reduced from 6.38 to 4.60 (mean) after ketamine administration ( $P < .005$ ) as measured by numerical rating scale and this reduction in pain continued from 3 months to 6 years. Also, there was a significant reduction in the use of opioid mean morphine equivalent dose (MMED) from 216 mg/day to 89 mg/day after ketamine administration ( $P < .005$ ) which accounts for overall reduction of 59%. With ketamine infusion, the use of opioids was not found to be increased by the patients during their hospitalization. Patients who responded well to infusion were further given treatment with ketamine lozenges and were followed up for 2 years.

With use of ketamine lozenges after infusion, 31% of the patients stopped the use of opioids compared to only 6% who did not receive lozenges. 11% of patients who have started taking lozenges afterwards, increased their usage of opioids. Common and mild adverse effects were observed. 46% patients experienced light-headedness and dizziness, 25% experienced tiredness and sedation, 12% experienced headaches, 12% experienced hallucinations, and 8% experienced vivid dreams. On reducing the amount of infusion, the adverse effects were also reduced. Overall, sub-anesthetic and subcutaneous ketamine infusion was well tolerated, with mostly mild adverse effects and no serious adverse effects. Ketamine lozenges seems to be a good and promising option for providing long term benefits to the patients with chronic non-malignant pain and for the patients not responding well to pharmacological and other behavioral therapies.

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