

# Ketamine nasal spray may a prove safe and effective treatment for refractory migraine

May 30 2023

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Ketamine taken in the form of a nasal spray may prove a safe and effective treatment for refractory chronic migraine, suggests a single center study, published in *Regional Anesthesia & Pain Medicine*.

It's a more convenient alternative to [intravenous infusion](#)—the usual method of administration for these patients—but the potential for

overuse means that it should be reserved for those in whom other treatment approaches have failed, caution the researchers.

Several clinical trials have shown that intravenous ketamine is effective for [chronic headache](#). But it typically requires the input of a pain specialist to adjust the dose and monitor side effects, so limiting its use in outpatient clinics, say the researchers.

And while there is some evidence that intravenous ketamine can be used for headache disorders, such as migraine and cluster headache, it's not clear if ketamine could also be safely used for chronic migraine that is resistant to treatment.

To try and find out, the researchers retrospectively reviewed the outcomes and experiences of people given nasal ketamine [spray](#) for chronic refractory migraine between January and February 2020 at one single specialist headache center.

During this period, 242 people were prescribed a nasal ketamine spray, 169 of whom (80% women; average age 44) agreed to be interviewed.

Most reported daily headache (67.5%) and nearly 85% had tried more than 3 types of preventive drugs. They currently used around 2 of these.

The most common reasons for wanting to use nasal ketamine spray included partial responses to reliever painkillers (100, 59%) and preventive drugs (52, 31%), previous benefit from intravenous ketamine (38, 22.5%), and the failure of intravenous lidocaine (22, 13%).

Forty one (25%) and 46 (28%) patients were offered nasal ketamine spray before and after intravenous ketamine infusion, respectively; 47% never received intravenous ketamine.

Overall, they said they used the [nasal spray](#) 6 times, over an average of 10 days a month. Nearly half (49%) said the spray was "very effective" while 39.5% found it "somewhat effective." Over a third (35.5%) said their quality of life was "much better."

Compared with other reliever drugs, 73 (43%) thought the nasal spray was "much better" and 50 (29.5%) felt it was "somewhat better."

Almost three quarters said they used fewer pain reliever meds when using nasal ketamine spray. At the time of the interview, almost two thirds (65%) were still using the spray.

Nearly 3 in 4 (74%) reported at least one [side effect](#), of which fatigue and double/[blurred vision](#) were the most common, followed by cognitive effects, such as confusion/dissociation, vivid dreams, hallucinations. But these were mostly temporary.

The study was based on a single tertiary headache center, and comprised primarily young White women, so the findings may not be more widely applicable, say the researchers. And most participants used the spray alongside other meds, making it difficult to assess the therapeutic benefit of the spray by itself, they add.

The most effective, safe dose also remains to be determined in the absence of any clinical guidelines, they point out. And at the time of writing, nasal ketamine spray had not been formally approved for [headache](#) or pain.

Dependency is a potential drawback, the researchers add, highlighting that their study showed 23 people used the spray daily and 37 used it more than 15 days/month.

"[This] should be addressed carefully and individually, as some may

respond only to repeated [intranasal] ketamine while some may overuse it," they caution. "Clinicians should only consider the use of a potentially addictive medication such as ketamine for significantly disabled patients with migraine," they advise.

They conclude, "This retrospective study suggests that [intranasal] [ketamine](#) may offer a pain-relieving effect with limited [[side effects](#)] for [refractory chronic migraine] in the outpatient setting," but further [clinical trials](#) are needed to confirm the findings.

**More information:** Real-world study of intranasal ketamine for use in patients with refractory chronic migraine: a retrospective analysis, *Regional Anesthesia and Pain Medicine* (2023). [DOI: 10.1136/rapm-2022-104223](#)

Provided by British Medical Journal

Citation: Ketamine nasal spray may a prove safe and effective treatment for refractory migraine (2023, May 30) retrieved 4 May 2024 from <https://medicalxpress.com/news/2023-05-ketamine-nasal-spray-safe-effective.html>

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