

Dissociative Event in a Chronic Pain Patient After Use of Topical Ketamine 10% Cream: A Case Report

Rachel Esparza, MD^{1,2}; Drew Michael S. Donnell, MD, MS²; Alyson M. Engle, MD²
¹Shirley Ryan AbilityLab, Chicago, IL; ²Northwestern University/McGaw Medical Center, Chicago, IL

Introduction

- Ketamine has been used off-label for analgesia at subanesthetic doses in patients with acute and chronic pain.
 - may reduce pain
 - significantly lower plasma levels ¹⁻³
 - minimal systemic side effects vs. IV/PO
- Side effects of IV ketamine: vivid dreams, dissociative events.
 - Central effects, higher systemic plasma levels.³
- To our knowledge, there are no documented cases of dissociative events after using topical ketamine.
- We present a case of a patient who experienced a dissociative event seven days after initiating use of topical ketamine 10% compound cream.

Methods

- Reviewed literature on topical ketamine and side effects.
- As the case report is devoid of patient identifiable information, it is exempt from IRB review requirements as per Northwestern University's policy. Informed consent was obtained.

Case Report

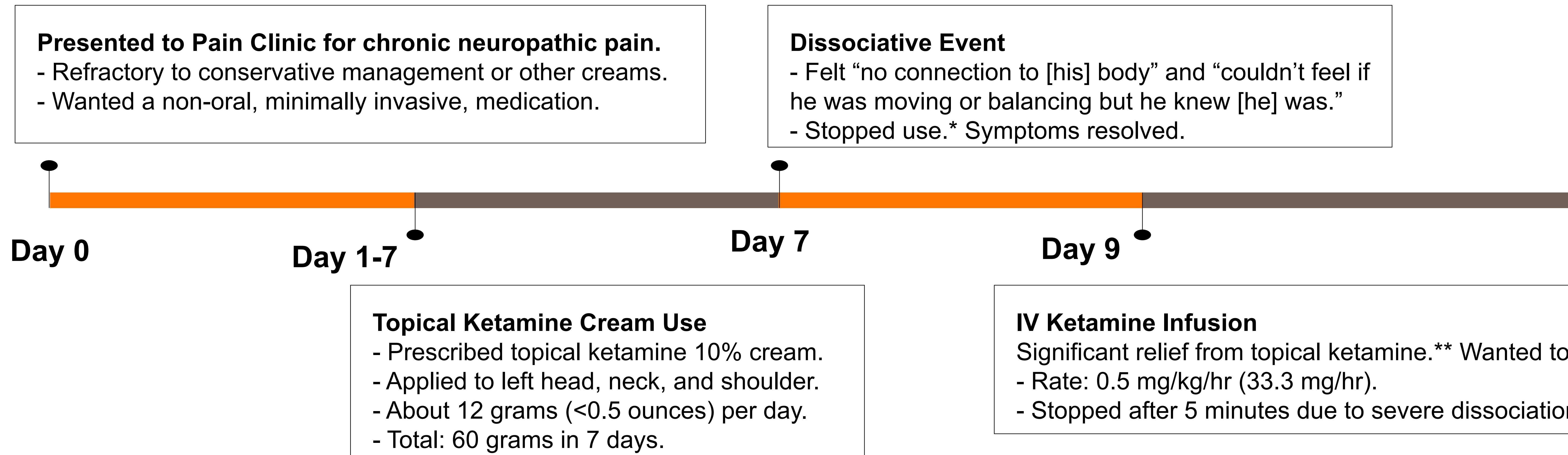
- 60 year old male with PMHx of diffuse chronic pain, SDH s/p emergent decompression (2014), and anxiety.
- No history of hallucinations, schizophrenia, or mood disorder.
- Pain Symptoms: neuropathic pain along the skin of the left side of his head radiating to left neck and anteroposterior shoulder.
- Physical Exam: skin hyperalgesia and allodynia along area of pain.

Conclusion

This is a novel account given that current research suggests significantly low likelihood of systemic side effects due to reduced or undetectable plasma levels of ketamine after using topical ketamine.

- Future research need: plasma levels of both ketamine and norketamine (ketamine metabolite) after use of topical ketamine.
- Possible causes:
 - Individual differences in systemic absorption (e.g. due to skin penetration as in scleroderma vs. aging skin)
 - Individuals' gene expression profile
 - Number of ketamine receptors expressed at cellular level.
 - Individuals' underlying anxiety and anticipation of side effects

Many studies support the use of ketamine for chronic pain, anxiety and depression. Clinicians should be aware of the safety profile, abuse potential, and potential side effects, including dissociative or psychotomimetic effects with topical ketamine.



Full Report



References

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