

Academic Emergency Medicine Editor-in-Chief Pick of the Month

Ketamine, Sriracha, and James Dean

Millenials, you did not discover Sriracha. Likewise, ketamine was not discovered after the advent of Twitter and, like Sriracha, many old docs have loved ketamine for years. A love affair that was best kept clandestine.

In the 1990s, ketamine halfway enjoyed the same reputation it halfway enjoys today. Ketamine is like the kid at the back of the classroom, who knew the principal's office well, got a smoking permit, and a tattoo at age 17. Everybody knows that ketamine's uncle phen (street name PCP) did hard time. But ketamine can work magic like no other drug...for intubation with a SBP of 80 mmHg or a chin lac repair in the superhuman wild child. Maybe ketamine treats depression and suicidality...and now it appears effective to treat pain. That's ketamine. The James Dean of anesthetic-analgesics. A mixed reputation, driven by misunderstanding.

Maybe ketamine does something to intracranial pressure, or maybe it increases neuronal calcium influx via its effect on glutamate receptors, or decreases calcium entry by its antagonism of the N-methyl-d-aspartate (NMDA) receptor in hippocampal neurons. A confusing drug with opposing effects on multiple receptors, bolstering its mysterious persona. It sometimes causes vomiting, but not very often. In dissociative doses, it does cause really amazingly cool nystagmus.

[The systematic review by Karlow et al](#) shows us a relatively new facet of ketamine, leveraging its analgesic effect as an alternative to opioids. Karlow et al specifically analyzed randomized trials that used relatively low (sometimes called subdissociative) doses of ketamine, generally <1 mg/kg. Turn quickly to **[Figure 2 in Karlow et al](#)**, and see that ketamine works at least as well as morphine at reducing pain. Then see **[Table 2](#)**, and see that the kid got a warning, but not a trip to the principal's office. Ketamine definitely increased the incidence of nausea and feeling really weird, but it had a lower incidence of cardiovascular side effects than morphine. Taken together, the data in **[Karlow et al](#)** suggest that the adoption curve for ketamine use for pain is ready to move into its rapid upstroke phase.

Like Sriracha and James Dean, ketamine remains an enduring classic, good for many purposes, as it has been for years.

Best wishes,
Jeffrey A. Kline, MD
Editor-in-Chief, Academic Emergency Medicine

Narrative Summary

Zachary F. Meisel, MD, Associate Professor of Emergency Medicine at the Perelman School of Medicine at the University of Pennsylvania, places the EIC Pick into perspective in the emergency setting:

As part of an ongoing study on shared decision making and pain relief in the emergency department (ED), we've been conducting interviews with providers and patients. The analysis is ongoing, but I can share some of what we have been hearing about pain and opioids in the ED. Both physicians and patients are telling us this: (paraphrasing) "Please don't box me into making a choice about opioids or no opioids without first telling me about the choices and the relative risks and benefits for each alternative."

Ketamine seems to be always on that list of alternatives for pain treatment in the ED, but it clearly comes with some calculus of benefits to side effects/risks. [This paper](#) helps clarify some of that calculus, so we can make better decisions with and for our patients.