Pharmacist's Letter
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Guide Safe Use of Ketamine

You'll get **more questions about safe use of IV ketamine as interest grows for a myriad of uses**...acute pain, ICU sedation, etc.

Ketamine may be a good option due to its potent analgesic and sedative effects...plus quick onset, short duration, and low cost.

But ketamine can cause psychotic-like effects (hallucinations, etc)...often called "emergence reactions," since they may occur when emerging from anesthesia...and can occur at lower ketamine doses.

Continue to save ketamine for when typical meds don't work or aren't the best fit...since evidence is often limited.

Ensure you have protocols to guide ketamine use, including patient selection...and hemodynamic and respiratory monitoring.

For example, ketamine can bump up heart rate and BP. Avoid it if these increases could be risky...such as a patient with an acute MI or decompensated heart failure.

And lean away from ketamine in schizophrenia...its psychotic-like effects may be more pronounced in these patients.

Develop order sets with your IT team to help keep doses straight, since they vary widely by use...ensure monitoring intensity increases with dose...and make certain it's clear where ketamine can be given and by whom.

Generally feel comfortable using low "sub-dissociative" ketamine doses...such as 0.1 to 0.3 mg/kg IV for acute pain...in the ED or ICU with routine vital monitoring and continuous pulse oximetry.

Add ECG monitoring as doses step up...such as with a 0.5 mg/kg IV bolus followed by an infusion for ICU sedation.

And restrict high ketamine doses in non-intubated patients.

For example, if using 0.5 mg/kg for depression, consider a protocol similar to moderate-sedation...such as limiting who can order and administer ketamine and how long to monitor after the dose.

To reduce the risk of emergence reactions, infuse ketamine boluses slowly...and provide a low-stimulus environment if possible.

Tell clinicians to prepare patients by educating about the possible effects...and to orient the patient as sedation wears off.

Find out more about ketamine's efficacy and safety in our charts...*Acute Pain*, *Status Epilepticus*, *Stimulant Intoxication*, and our newest, *Ketamine for ICU Analgesia and Sedation*.

Key References:

-West J Emerg Med 2020;21(2):272-81
-Eur J Pharmacol 2019;860:172547
-Reg Anesth Pain Med 2018;43(5):456-66
-Am J Emerg Med 2017;35(6):918-21

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