Correspondence

Ketamine: Studies Show Benefit

The beneficial psychotropic properties of ketamine, particularly its antidepressant effect, have been demonstrated in several favorable studies. These are encouraging for both patients struggling with mental illness as well as their treating clinicians. A controversial new trend in ketamine dispensing was noted in a recent Wall Street Journal article[1] and raises our concern as members of the psychiatric community. The article highlights several new, online for-profit companies selling ketamine tablets and lozenges for medically unsupervised use at home.[1] As of January 2023, there is no FDA approved treatment for use of ketamine in any modality (tablet, lozenge, infusion) for any psychiatric condition; rather esketamine, a similar but chemically structured variation of ketamine, is the only FDA approved form of ketamine for treatment of depression and suicidality.[2] Unsupervised ketamine treatment is dangerous, debatable, and extremely worrying.

When the FDA approved esketamine treatment for depression, it also required that treatments be monitored in a structured, clinical environment due its potential for psychomimetic and cardio stimulating effects. While these effects are generally well tolerated and transient, they can potentially be quite distressing on the patient and lead to serious adverse outcomes. During treatments, trained medical staff monitor vital signs, mental status for safety and tolerability as well as discharge readiness for two hours following esketamine administration. Beyond monitoring the patient during treatment, another important safety measure is to ensure the patient has a driver and does not operate a vehicle while under the effects of the medication. These measures are mandated, not optional. Allowing patients to self-administer ketamine unsupervised exposes the patients to serious sequalae including, but not limited to, hypertensive crisis, falls, driving accidents under the influence of a dissociative agent, and misinterpretation of environment or intentions of others while in a dissociative state. These in turn could lead to harm, even death, of the patient or others around them.

Another problem with oral ketamine is its low bioavailability. The bioavailability of oral ketamine (20% to 25%) is significantly lower than that of intravenous ketamine (approximately 100%), and it is also inferior to that of esketamine (approximately 50%). Because of the decreased bioavailability, higher doses of oral ketamine are likely to be required to achieve the desired antidepressant effect, increasing the risk of adverse side effects. There is insufficient data on the bioavailability and pharmacokinetic properties of oral ketamine, raising concerns about its growing popularity in the absence of appreciable evidence-based data to guide prescriptive practices. Aside from the pharmacodynamic properties of oral ketamine, there is a scarcity of data on the efficacy and safety profile of the drug's oral formulation for the treatment of depression or any other mental illness. There have only been a few studies on the use of oral ketamine for depression, with the majority of them being uncontrolled, and the few controlled studies having a small subject size.[3]

Ketamine has promise as another option to offer patients struggling with mental illness. We must continue to exercise caution and follow evidence-based practices to maximize patient outcomes while minimizing risk. Only esketamine has an FDA approval for treatment of depression (or any mental illness). Despite its lack of FDA approval, intravenous ketamine use has considerable favorable evidence when both forms are administrated in a controlled medical environment.[4] Oral ketamine use may prove to be another effective treatment for mental illness, but further study is needed to evaluate the risk to benefit ratio not only in prescribing/dosing but how we administer and monitor the drug. Until then, on line accessed ketamine for home use without proper medical supervision should be discourged.

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From Concerned Physicians to Lawmakers: Legislation Addressing the Teenage Vaping Epidemic

E-cigarettes are the most commonly used tobacco product among middle and high school students.[11] Highly addictive and higher concentrations of nicotine than combustible cigarettes, e-cigarettes are a critical threat to the health and safety of adolescents. Nicotine in particular has serious adverse effects on the developing brain and respiratory system.

The 2022 National Youth Tobacco Survey demonstrates that while the use of e-cigarettes has declined from its 2019 peak, 14.1% of high school students and 3.3% of middle school students still report using e-cigarettes.[6] Of these students, 27.6% reported daily use.[6] Most commonly used e-cigarettes were disposable, one-use devices (57.2% high school students, 45.8% middle school students).[6] More than 84.8% of teenagers report using flavored e-cigarettes, including fruit, candy, dessert, and menthol varieties.[6]

Given the magnitude of this situation and the known long-term effects of e-cigarettes, healthcare providers must look beyond individual counseling to political advocacy in an effort to make widespread change. Federal and state efforts to restrict adolescent use, limit unlicensed e-cigarette sales, and bar marketing to adolescents have thus far been modest, and achieved only limited success.

The U.S. Food and Drug Administration's (FDA's) attempts to regulate e-cigarettes has been slow and resulted in minimal success. In 2016, the FDA asserted that e-cigarettes met the definition of a "tobacco product" under the Tobacco Control Act. Based on that finding, the agency required companies to apply to continue marketing any new or existing e-cigarette products. Out of almost 6.7 million applications, the FDA has denied nearly one million.[10] In one widely covered decision, the agency even denied approval for all JUUL products marketed in the U.S. JUUL immediately filed a lawsuit however, and successfully pushed the FDA to reverse course.

This marketing review process was also used by the FDA to ban all flavors except for tobacco and menthol. This ban only applies to cartridge/pod-based e-cigarettes, so does not cover the increasingly popular disposable and refillable devices. We also know that menthol flavors appeal to teens and could become more attractive if they are all that is available. The tobacco industry has responded by offering more products not covered by the current restrictions.

Congress passed Tobacco 21 legislation raising the minimum legal sales age (MLSA) for tobacco products from 18 to 21 years old. Tobacco 21 provided no exemptions and applied to all tobacco products, including e-cigarettes. States may pass more restrictive laws, but either way, federal law requires states to demonstrate that retailers are complying with the new federal standard. Currently, 40 states have increased their MLSA age to 21 to match the federal law.[16] Missouri is not one of them.

In the absence of robust federal oversight, e-cigarette regulation has largely been left to the states. Seventeen states have no licensing requirements to sell e-cigarettes over the counter.[15] Twenty states have no special tax on e-cigarettes that may discourage use.[15] And e-cigarettes are widely advertised on television and the internet, as only a few states have passed their own marketing restrictions

Missouri does not define e-cigarettes as a "tobacco product." The state MLSA is 18, and legislation to increase that age has not made it out of committee. Missouri does require a