

Variant of club drug 'K' might have new life as antidepressant

October 15 2013, by Randy Dotinga, Healthday Reporter



But more research is needed on safety, long-term effectiveness and side effects, researchers say.

(HealthDay)—The veterinary tranquilizer ketamine—perhaps better known as the illicit "club drug" Special K—may be reformulated for use as an antidepressant, and researchers report promising early findings.

The goal is to produce a ketamine-like drug without nasty side effects, such as [hallucinations](#). In this new study, which researchers say is the most comprehensive of its kind, depressed people who took the drug reported improvement over three weeks.

Although the findings need to be replicated in other studies, "they do generate scientific data that will pave the way for future research," said study co-author Sanjeev Pathak, senior director of clinical development

with AstraZeneca Pharmaceuticals, which is funding the research.

It's still unclear whether the drug under development is safe or could be used long-term.

The study, published online Oct. 15 in the journal *Molecular Psychiatry*, also provides increasing evidence that a new class of medications with similar effects to ketamine could become available, said Michael Quirk, study co-author and director of discovery and preclinical sciences with AstraZeneca.

In the United States, about 9 percent of adults report depression, according to the U.S. Centers for Disease Control and Prevention. Drug companies want to bring a new antidepressant to the market because the existing medications don't work for everyone.

"The working rule of thumb is that a third of patients may get a response from the first treatment with an antidepressant, but a substantial proportion fail," said Dr. G. Caleb Alexander, co-director of the Johns Hopkins Center for Drug Safety and Effectiveness. Alexander was not involved in the research.

Failure of the first antidepressant treatment typically requires patients to try alternatives. That, of course, takes time, especially because antidepressants often act slowly.

Enter ketamine, which is used legally as an anesthetic in animals and people. It can put people in a trance-like state and cause hallucinations, which has led to its illegal use in the club scene, where it's known as Special K or K.

In recent years, researchers have started to investigate ketamine as an antidepressant, and some physicians are prescribing it off-label. It is

legal in the United States to prescribe government-approved drugs for nonapproved uses. Drug companies, however, hope to produce a nongeneric version of a ketamine-like drug that they can sell and promote.

Big questions remain regarding effectiveness, safety, long-term use, cost and side effects. The point is to capture the positive mood-altering properties without the negative [side effects](#).

The new research consists of two Phase II studies, meaning AstraZeneca is partway through the three stages of research that drugs must go through for approval in the United States.

In the new studies, the researchers tested a drug called lanicemine, which, like ketamine, disrupts how the brain processes neurotransmitters. In one of the studies, 152 people with depression were randomly assigned to take 100 milligrams or 150 milligrams of the drug or a placebo intravenously at three-day intervals for three weeks.

The patients who took the drug were more likely to report improvement in their depression during the three weeks they got the medication and for several weeks afterward, although the side [effect](#) of temporary dizziness was common. The hallucinations and delusions associated with ketamine were not evident.

More research is planned. "We've got a long way to go before deciding that this [drug](#) is adequately safe or effective enough that it should be put on the market," Alexander said.

More information: The U.S. National Library of Medicine has more about [depression](#).

Copyright © 2013 [HealthDay](#). All rights reserved.

Citation: Variant of club drug 'K' might have new life as antidepressant (2013, October 15)
retrieved 20 March 2024 from <https://medicalxpress.com/news/2013-10-variant-club-drug-life-antidepressant.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.