Medical Xpress

Buprenorphine implants may be effective relapse prevention tool for adults with opioid dependence

July 19 2016

While buprenorphine has long been used to treat adults with opioid dependence, its efficacy can be hindered by lack of adherence to daily, sublingual (beneath the tongue) doses of the medication. New research led by the Icahn School of Medicine at Mount Sinai published online today in *The Journal of the American Medicine Association* (*JAMA*) showed that a higher percentage of stable, opioid-dependent patients given six-month buprenorphine implants remained abstinent compared to patients given the medication sublingually.

The study is the first head-to-head safety and efficacy trial of buprenorphine implants and daily sublingual buprenorphine on long-term remission of opioid use disorder in patients who were previously stabilized on 8mg or less of sublingual buprenorphine. Findings indicate that the implants are non-inferior to sublingual buprenorphine in the main outcome measure, which was maintaining abstinence from illicit opioids in at least four of the six study months.

"There are some individual and public health risks with daily dosing of sublingual buprenorphine, such as missed doses and accidental pediatric exposure, as well as the risk of theft or intentional diversion," said Richard N. Rosenthal, MD, Professor of Psychiatry, Icahn School of Medicine at Mount Sinai and Medical Director of Addiction Psychiatry, Mount Sinai Behavioral Health System. "Given that transitioning to implants did not lead to increased craving or withdrawal symptoms and

that the implants remain in place over the active treatment period, buprenorphine implants are an opportunity to reduce adherence issues and may improve efficacy in stable patients with opioid dependence."

Opioids are a class of medications that relieve pain and include oxycodone, hydrocodone, codeine, morphine, fentanyl and others. They reduce the intensity of pain signals reaching the brain and affect those brain areas controlling emotion, which diminishes the effects of a painful stimulus. As people use opioids repeatedly, their tolerance increases and they may not be able to maintain the source for the drugs. This can cause them to turn to seeing multiple physicians for prescriptions or to the black market for these drugs and even switch from prescription drugs to cheaper and more risky substitutes like heroin. Opioid dependence is a growing public health problem in the United States and globally, associated with the spread of viruses such as HIV and hepatitis C, as well as fatal overdose when left untreated.

In this study, 177 opioid-dependent participants with stable abstinence were randomly assigned to sublingual buprenorphine with placebo implants or buprenorphine implants with sublingual placebo. Over six months, 86 percent of participants receiving implants and 72 percent receiving sublingual buprenorphine maintained abstinence from opioids.

"What we would like to address in future studies is the rate and predictors of relapse after implant discontinuation," said Dr. Rosenthal. "Our population in this trial also had a high response rate in the control group, so further studies are needed in broader populations to assess the efficacy of buprenorphine implants versus sublingual buprenorphine in other settings."

More information: *JAMA*, DOI: 10.1001/jama.2016.9382
JAMA, DOI: 10.1001/jama.2016.8897

Provided by The Mount Sinai Hospital