Asians fighting alcoholism may benefit from new study

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(Medical Xpress) -- New UCLA psychology research indicates that Asians who are struggling with alcoholism may benefit especially from naltrexone, one of three medications approved by the U.S. Food and Drug Administration for the treatment of alcoholism.

Recent research has found that a gene variant may predict naltrexone treatment success for alcoholism. About 50 percent of patients of Asian descent have a particular mutation that makes them likely to benefit from naltrexone, compared with about 20 percent of Caucasians and less than 5 percent of African Americans, said lead study author Lara Ray, an assistant professor of psychology and director of the UCLA

Addictions Laboratory.

The findings are currently available online (1.usa.gov/ojdjPJ) in the journal Neuropsychopharmacology and will be published in an upcoming print edition of the journal.

The mutation in question is in the OPRM1 gene, which codes for the mu opioid receptors in the brain. People with "AG" or "GG" variants of OPRM1 have better clinical alcohol-treatment outcomes with naltrexone than those with the "AA" variant, Ray said, adding that approximately half of Asians have at least one copy of the "G" nucleotide at the particular location.

Ray's laboratory conducted a study that tested the effect of naltrexone versus a placebo in heavy drinkers of Asian descent. In the study, 35 participants received alcohol in the laboratory through an infusion of ethanol that was the equivalent of two to three standard alcoholic drinks. They completed two alcohol sessions, one after taking naltrexone and one after taking a sugar pill.

"Our results revealed that naltrexone reduced the positive feelings of alcohol intoxication among individuals with the 'AG' or 'GG' genotypes but not among those with the 'AA' genotype," said Ray, who is also a faculty member with the UCLA Brain Research Institute and the department of psychiatry and biobehavioral sciences at the Semel Institute for Neurscience and Human Behavior at UCLA.

"Specifically, 'AG'/'GG' participants reported more sedative and unpleasant feelings of intoxication on naltrexone versus the placebo," she said. "In addition, they reported less craving for alcohol on naltrexone versus the placebo. These results were confirmed even after controlling for genes responsible for the metabolism of alcohol and an 'alcohol flushing response' often reported by individuals of Asian descent."

People vary widely in how they respond to medications, and this is true of medications for alcoholism, Ray said. Naltrexone can reduce the stimulating feelings of alcohol; patients on naltrexone often report that their alcohol 'high' is not as pleasant, which helps them reduce their drinking, she said.

"In short, these efforts are a good example of personalized medicine, which seeks to improve clinical care by identifying who is more likely to benefit from a medication based on their genetic make up," Ray said.

Co-authors of the study are Spencer Bujarski, a UCLA graduate student in clinical psychology; Pauline Chin, a former UCLA researcher in Ray's laboratory; and Karen Miotto, a clinical professor in department of psychiatry and biobehavioral sciences at UCLA's Semel Institute and director of alcoholism and addiction medicine service at the David Geffen School of Medicine at UCLA.

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