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Medical Marijuana May Worsen PTSD Symptoms, Increase Violence

Deborah Brauser | December 15, 2014

AVENTURA, Florida — Although a growing number of states have approved posttraumatic stress disorder (PTSD) as a qualifying condition for medical marijuana use, new research shows that the drug may actually worsen symptoms and increase violent behavior.

A large observational study of more 2000 participants who were admitted to specialized Veterans Administration treatment programs for PTSD showed that those who never used marijuana had significantly lower symptom severity 4 months later than those who continued or started use after treatment. Veterans who were using marijuana at treatment admission but quit after discharge ("stoppers") also had significantly lower levels of PTSD symptoms at follow-up.

On the other hand, the highest levels of violent behavior were found in the so-called "starters," those who were not using the substance at admission but who started use after discharge.

At the American Academy of Addiction Psychiatry (AAAP) 25th Annual Meeting, lead author Samuel T. Wilkinson, MD, from the Yale University School of Medicine, in New Haven, Connecticut, told conference delegates that the findings suggest marijuana nullifies the benefits of intensive PTSD treatment.

"This wasn't a randomized controlled trial. But at least in this study, we found that marijuana is not associated with improvement in PTSD and that initiating marijuana was associated with worsening outcomes in a number of measures," said Dr Wilkinson.

Little Substantive Evidence

Despite the fact that a number of states have approved the use of medical marijuana for PTSD, there's little evidence to support its use for treatment of the disorder.

"There have been a few longitudinal assessments, but no randomized controlled trials showing efficacy and safety," added Dr Wilkinson.

The investigators evaluated data from the Northeast Program Evaluation Center for veterans who were admitted across the United States between 1991 and 2011 into specialized intensive PTSD treatment programs lasting a mean of 42.5 days.

A total of 2276 representative veterans were included in this analysis. They were split into four groups: in addition to the marijuana starters (n = 831), those with no use at treatment admission or after discharge were placed in the "never used" group (n = 850); those using at admission and after discharge were placed in the "continuing use" group (n = 296); and those who quit using after treatment were in the "stoppers" group (n = 299).

All were evaluated at admission and at a follow-up 4 months after discharge. Measures used included the short version of the Mississippi Scale (MISS) to assess PTSD symptom severity, the drug and alcohol subscales of the Addiction Severity Index (ASI), and reports of violent behavior.

Results showed that use of marijuana was significantly associated with higher PTSD symptom severity, as well as higher levels of violent behavior and alcohol and drug use.

Scores on the MISS showed that all groups except the starters had at least some improvement. However, the lowest levels of PTSD symptoms at the 4-month follow-up were in the marijuana stoppers, with a score decrease of 7.9% ($P < .0001$ vs the continuing users and the starters), and in the never users, with a score decrease of 5.5% ($P < .0001$ vs the starters).

Surprise Finding

Although there were changes in violence scores in all three groups, improvement was significantly less in the starters than in the other 3 groups ($P < .0001$ for all three comparisons). "This was a surprise because generally, marijuana is not thought to be associated with violence. There's been a little bit of literature investigating this, but this was interesting," said Dr Wilkinson.

The starters also had greater severity in scores on both the ASI drug use and alcohol use subscales vs the other three groups ($P < .0001$ for all).

On the other hand, the stoppers had significantly lower severity scores on the drug use subscale ($P < .0001$ vs the other 3 groups) and lower alcohol subscale scores ($P < .0001$ vs continuing users; $P < .001$ vs never users).

"This showed that those who started marijuana did turn to other drugs to cope with residual PTSD symptoms, which is to be expected," Dr Wilkinson said. "However, there was no evidence that those who stop cannabis use turn to other drugs or alcohol."

During the Q&A session after his presentation, an audience member pointed out that there was no implication that cannabis drove PTSD severity and asked whether it could just be that the patients with more severe symptoms use more cannabis.

"There wasn't a sense of that from these data," replied Dr Wilkinson. However, he added that they found only an association and not causation, because the study was not prospective or randomized.

"When we looked at a different analysis, there was a dose response. Those who used more marijuana or who had greater change in marijuana use had worse PTSD symptoms," he said.

When another attendee mentioned that she had seen violent behavior in some veterans who use marijuana and have traumatic brain injuries (TBIs), Dr Wilkinson noted that the investigators did not evaluate whether any of the study participants specifically had a TBI.

A Band-Aid Solution?

Session moderator Carla Marienfeld, MD, told *Medscape Medical News* that public perception has been that marijuana soothes those with PTSD.

"Addiction psychiatrists struggle a lot with how to communicate with our patients about this. People assume that there aren't a lot of risks, but there are some papers starting to show that there really are," she said.

"Most people assume things based on their own experience. So when you talk to patients, they often say, 'it's the only thing that helps me sleep' or 'it's the only thing that calms me down.' But when you actually start looking into the symptoms of whether or not they get better with marijuana use, I don't think studies, at least with these initial data, are going to bear that out."

Although Dr Marienfeld, like Dr Wilkinson, is from the Yale University School of Medicine, she was not involved with this research. She noted that it could be that cannabis is acting as a Band-Aid instead of being a long-term solution.

"Marijuana use may make patients feel better for the short term, and we need to look at that. Does it make things better for a few hours and then it gets worse the next day? That would be an important study to understand," she said.

She added that because Dr Wilkinson presented an association study, "there's not really a take-away for clinicians yet. But I think it's important for them to bear this in mind and watch for this kind of data."

Dr Wilkinson reports having received a past grant from the American Psychiatric Foundation/Janssen through Yale University for a project involving electroconvulsive and cognitive-behavioral therapies.

American Academy of Addiction Psychiatry (AAAP) 25th Annual Meeting: Paper presentation 5, presented December 6, 2014.

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