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Medical cannabis can reduce use of opioids in patients with chronic back pain and osteoarthritis, but further study needed

CHICAGO (March 22, 2022)—Providing patients with chronic back pain and osteoarthritis (OA) access to medical cannabis can reduce or even eliminate the use of opioids for pain management, according to two studies presented at the 2022 Annual Meeting of the American Academy of Orthopaedic Surgeons (AAOS). Led by Principal Investigator Asif M. Ilyas, MD, MBA, FAAOS, the studies also demonstrated that pain and quality of life scores improved after patients were certified for medical cannabis.

Fifty million Americans suffer from chronic pain not related to cancer,ⁱ which is often treated with opioids. However, there is a need for alternative therapies. In 2019, an estimated 10.1 million people aged 12 or older misused opioids in 2019,ⁱⁱ and opioid addiction remains at an all-time high. The use of medical cannabis has been researched as an alternative therapy to opioids, but further studies are needed to review efficacy, dosing, and how it can affect opioid use for pain management.

“In the setting of the current opioid crisis, we must identify alternatives that may mitigate the reliance on opioids for controlling pain,” said Dr. Ilyas, program director of the hand & upper extremity surgery fellowship at Rothman Orthopaedic Institute and professor of orthopaedic surgery at Thomas Jefferson University Hospital in Philadelphia. “At this point, we are not advocating for the routine use of medical cannabis or saying it is a better option, but our studies show potential.”

Medical Cannabis Use in Chronic Back Pain and OA Patients

The two studies reviewed data of filled opioid prescriptions filled for patients with chronic back pain and OA who were certified for medical cannabis access between February 2018 and July 2019. The average morphine milligram equivalents (MME) per day of opioid prescriptions filled six months before access to medical cannabis was compared to the six months after patients gained access.

The chronic musculoskeletal non-cancer back pain data showed:

- A significant decrease in the overall average MME per day after a medical cannabis prescription, from 15.1 to 11.0 (n=186).
- 38.7% of patients dropped to zero MME per day.
- Patients who started at less than 15 MME per day and greater than 15 MME per day had significant decreases, from 3.5 to 2.1 (n=134) and 44.9 to 33.9 (n=52). The percentages of patients who dropped to zero MME per day in these groups were 48.5% and 13.5%, respectively.
- Compared to baseline (three, six, and nine months), patients reported improved intensity, frequency, and daily function after medical cannabis use.
- Patients who used two or more routes of administration for medical cannabis showed a significant decrease in MME per day, from 13.2 to 9.5 (n=76).

For the treatment of OA, patient outcome measures were assessed at three, six, and nine months following medical cannabis use. After access to medical cannabis, the study demonstrated:

- There was significant decrease in the average MME per day of prescriptions filled by patients, from 18.2 to 9.8 (n=40). The average drop in MME per day was 46.3%.
- The percentage of patients who dropped to zero MME per day was 37.5%.
- Patients’ pain scores decreased significantly, from 6.6 (n=36) to 5.0 (n=26) and 5.4 (n=16), at three and six months, respectively.
- The Global Physical Health quality of life score increased significantly, from 37.5 to 41.4, at three months.

“Our studies show that medical cannabis can be an effective treatment for chronic back pain and osteoarthritis, potentially helping reduce the reliance on opioids,” said Dr. Ilyas. “However, additional research is needed to better understand the best routes and frequencies, potential adverse events, and long-term outcomes of medical cannabis use. In the interim, prescribers should use shared decision making with their patients when considering medical cannabis for chronic musculoskeletal pain conditions.”

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2022 AAOS Annual Meeting Disclosure Statement

About the AAOS

With more than 39,000 members, the [American Academy of Orthopaedic Surgeons](#) is the world’s largest medical association of musculoskeletal specialists. The AAOS is the trusted leader in advancing musculoskeletal health. It provides the highest quality, most comprehensive education to help orthopaedic surgeons and allied health professionals at every career level to best treat patients in their daily practices. The AAOS is the source for information on bone and joint conditions, treatments, and related musculoskeletal health care issues, and it leads the health care discussion on advancing quality.

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ⁱ Dahlhamer J, Lucas J, Zelaya C, et al. Prevalence of chronic pain and high-impact chronic pain among adults - United States, 2016. MMWR Morbidity and Mortality Weekly Report. 2018;67(36):1001–1006.

ⁱⁱ [Opioid Crisis Statistics. U.S. Department of Health and Human Services.](#)