

Use of Tetrahydrocannabinol and Cannabidiol Products in the Perioperative Period Around Primary Unilateral Total Knee Arthroplasty and the Impact on Opioid Consumption

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Introduction: Given the opioid crisis in America, patients are trying alternative medications including tetrahydrocannabinol (THC) and other cannabidiol (CBD) containing products in the perioperative period, especially in states where the use of these products is legal. This study sought to analyze any association of CBD/THC products usage in the perioperative period with postoperative opioid use after hospital discharge for primary unilateral total knee arthroplasty (TKA) patients.

Methods: A prospective cohort of primary unilateral TKA patients by five fellowship trained arthroplasty surgeons were enrolled at a single institution. Patients who completed detailed pain journals were queried for THC/CBD product usage. Pain medications were converted to morphine milligram equivalents (MME). Statistical analysis was performed with <0.05 .

Results: Data from 84 patients following primary unilateral total knee arthroplasty were analyzed. 22.6% of TKA patients used THC/CBD products in the perioperative period. There was a wide variety of usage patterns among those using THC/CBD products. In comparing patients who did not use any THC/CBD products to those who did, there was no significant difference in the length of narcotic use (17.31 vs. 17.26 days, $p=0.9872$), total MME taken (441.31 vs. 450.33, $p=0.9316$), or narcotic pills taken (52.03 vs. 58.61, $p=0.5544$). Average pain scores were similar between groups (3.79 vs. 3.40, $p=0.3372$). There was no significant difference in the percentage of patients requiring a refill of narcotics (40.00% vs. 42.11%, $p=0.8694$) or length of stay (1.45 vs. 1.37 days, $p=0.7336$).

Conclusions: Understanding that THC/CBD usage was not consistent for patients who used these products, 22.6% of primary unilateral TKA patients tried THC/CBD products in the perioperative period, but THC/CBD use was not associated with a major effect on narcotic requirements. Further studies on the effects of THC/CBD in the perioperative period are needed as these therapies become more widely available in the US.