

The Role of Cannabis on Total Hip and Knee Surgeries Outcomes: A Systematic Review and Meta-Analysis

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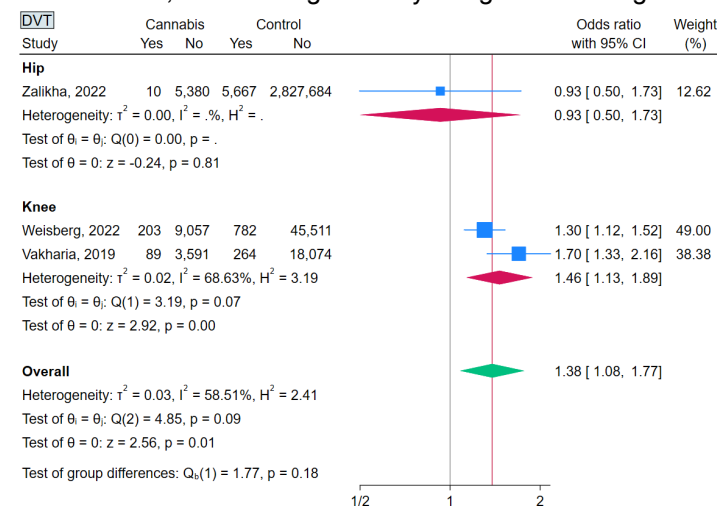
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INTRODUCTION: Cannabis, known for its medicinal properties, is increasingly being used by patients, including those undergoing joint arthroplasty. Despite its potential benefits, the impact on postoperative outcomes is unclear. Conflicting studies on opioid use and pain management highlight the need for additional research into cannabis' effects on post-operative prognosis in arthroplasty patients. Our meta-analysis aims to evaluate the effects of preoperative cannabis use on postoperative outcomes in TKA and THA patients, focusing on opioid usage, pain scores, hospital length of stay, costs, readmission, and reoperation rates.

METHODS: Following CRD and PRISMA 2020 guidelines, we conducted a comprehensive search across multiple databases in October 2023, including MEDLINE (PubMed), Scopus, Cochrane Central Register of Controlled Trials, and Web of Science without restrictions. Eligible studies included RCTs, prospective trials, case-control, and retrospective trials on TKA and THA patients, focusing on cannabis use. Statistical analysis was conducted using STATA version 17.0, employing random-effects models for pooled estimates.

RESULTS: We identified 208 references from PubMed/Medline, Scopus, Web of Science, and other databases. After thorough review, 18 references, encompassing 12,483,813 individuals, met the criteria for further assessment. The odds ratio (OR) for reoperation and readmission was 1.35 [0.69, 2.66] and 0.89 (95% CI: 0.41, 1.92), respectively. The mean difference (MD) for inpatient morphine milligram equivalent (MME) and length of stay (LOS) was -1.71 [-13.46, 10.05] and -0.13 [-0.33, 0.08], respectively. The MD for the VAS pain score 24-72 hours post-operation was 0.40, ranging from -0.07 to 0.87. The OR for PTE and DVT was 1.54 [0.1, 23.24] and 1.38 [1.08 to 1.77], respectively.

DISCUSSION AND CONCLUSION: The occurrence of DVT and surgical complications, including reoperations and readmissions, was significantly higher among cannabis users, particularly among post-TKA patients.



Random-effects REML model