INPLASY

Comparison between the results of total and partial knee arthroplasty: an scoping review protocol

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ADMINISTRATIVE INFORMATION

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Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 6 September 2024 and was last updated on 6 September 2024.

INTRODUCTION

*R*eview question / Objective Research question: which surgical technique, total knee arthroplasty (TKA) or partial knee arthroplasty (PKA), has better clinical and functional results according to the available literature?"

Background Knee arthroplasty (KA) is a common surgery for elderly patients to replace damaged joint surfaces. Indicated for osteoarthritis, inflammatory arthritis and anatomical deformities, as well as extensive traumatic injuries, TKA can be total (TKA) or partial (TKA). The choice between TKA and PKA depends on the stage of the disease and the patient's individual needs. Thus, through an integrative literature review, we will to compare the results of TKA and PTA.

Rationale The rationale is to systematically map the existing evidence on the clinical outcomes of both procedures, given the increasing demand for knee arthroplasties globally. Total knee arthroplasty (TKA) and partial knee arthroplasty (PKA) are commonly performed to treat advanced osteoarthritis, but there is ongoing debate regarding their comparative effectiveness in terms of recovery, function, complications, and long-term patient satisfaction. A scoping review will allow for a comprehensive assessment of available literature, identifying knowledge gaps and guiding future research, while the registration on INPLASY ensures transparency and methodological rigor in the review process.

METHODS

Strategy of data synthesis First, all relevant studies will be identified and extracted based on

pre-defined inclusion and exclusion criteria. The data will be organized and charted according to categories such as patient demographics, surgical outcomes (e.g., pain relief, functional improvement, complication rates), and follow-up duration. Quantitative results will be tabulated, and descriptive statistics will be used to summarize the outcomes of both total and partial knee arthroplasty. If possible, subgroup analyses will be performed to explore differences in specific populations (e.g., age, comorbidities). The synthesis will focus on identifying patterns, trends, and gaps in the literature, rather than conducting a meta-analysis, as the goal is to map out the available evidence comprehensively. The results will be presented in both narrative and tabular formats to provide a clear and concise overview of the findings.

Eligibility criteria   The eligibility criteria for this scoping review include only studies published in English that compare total knee arthroplasty (TKA) and partial knee arthroplasty (PKA) outcomes. Eligible studies will focus on adult patients (18 years or older) undergoing either TKA or PKA for conditions such as osteoarthritis. Both observational studies and clinical trials will be considered, provided they report relevant outcomes such as post-operative pain, functional improvement, complication rates, revision rates, or long-term implant survival. Systematic reviews and meta-analyses with comparative data will also be included, while case reports, expert opinions, and non-comparative studies will be excluded. There will be no restrictions on publication date, allowing for a comprehensive synthesis of available evidence.

Source of evidence screening and selection The process involves systematically identifying and evaluating studies that compare outcomes of total and partial knee arthroplasty. This includes defining inclusion and exclusion criteria based on factors such as study design, patient population, and outcome measures. Relevant sources are screened through a process of title and abstract review, followed by a full-text evaluation to ensure they meet the criteria. The selected studies are then categorized to map the existing evidence and identify gaps in the research, providing a comprehensive overview of the comparative results of the two types of knee arthroplasty.

Data management   This process will includes extracting relevant data such as study design, outcomes, and results, and then organizing this information into a structured format for analysis, to ensure data consistency, facilitates integration of

findings from diverse sources, and maintains data security and quality, ultimately supporting a comprehensive and reliable overview of the evidence.

Reporting results / Analysis of the evidence Reporting the results will be involve summarizing the key findings from the included studies, such as the comparative outcomes of total versus partial knee arthroplasty. This will include highlighting the range of results, methodologies, and patient characteristics, to provide a clear synthesis of the evidence, identifying trends, common outcomes, and gaps in the research. Additionally, it should offer a narrative that integrates these findings, discusses their implications, and suggests areas for future research to address any identified gaps.

Presentation of the results To present the results we will summarize the key findings using a structured approach. Start with an overview of the number and types of studies included, followed by a comparative analysis of outcomes such as pain relief, functional improvement, and complication rates for both total and partial knee arthroplasty. We will use tables and figures to visually represent data, trends, and variations across studies, and provide a narrative that integrates these findings, discusses their implications, and highlights any gaps in the current evidence, offering a comprehensive synthesis of the comparative results.

Language restriction Only articles in english will be included.

Country(ies) involved Brazil.

Keywords Orthopaedics; Traumatology; Arthroplasty; Knee; Osteoarthritis.

Dissemination plans Dissemination plans involve strategically sharing the findings with relevant stakeholders to maximize impact. This includes publishing the review in a peer-reviewed journal to reach the academic and clinical communities, presenting the results at conferences and workshops to engage with practitioners and researchers, and creating summaries or infographics for dissemination through professional networks and social media platforms. Additionally, consider reaching out to clinical guidelines committees and healthcare organizations to influence practice and policy, ensuring that the review's insights contribute to evidence-based decision-making in knee arthroplasty.

Contributions of each author

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