

What percentage of patients are dissatisfied post-primary total hip and total knee arthroplasty?

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Response/Recommendation: According to our conducted systematic review with a proportional meta-analysis, the pooled percentage of dissatisfied patients after total knee arthroplasty (TKA) was 14%, 12% and 8% at short term (up to 2.5 years), mid-term (up to five years), and long term follow up (more than five years), respectively. The pooled percentage of dissatisfied patients after total hip arthroplasty (THA) was 10%, 4% and 7% at short term, mid-term and long term follow up, respectively.

Level of Evidence: Moderate

Rationale: We conducted a systematic review with a proportional meta-analysis in order to estimate the percentage of patients who were dissatisfied after undergoing hip and knee arthroplasties. Proportional meta-analysis is widely used over the last two decades to evaluate questions related to prevalence and proportions[1][2]. We searched for studies reporting patient satisfaction after total hip and knee arthroplasties. We used the following keywords: total hip arthroplasty, total knee arthroplasty and satisfaction in a detailed search strategy specific for each data base. Two reviewers (VEO,ASY) searched the following databases: (Cochrane Central:4173 on 5 April 2024), (PubMed:3729 on 5 April 2024), and (Embase: 2171 on 8 May 2024). Two reviewers (WSO,ASY) screened the search results for eligibility. After duplicate removal and exclusion of texts ineligible from title and abstract, 671 studies were eligible for full text screening. Finally, 204 studies were included in the final analysis. The included studies were two case control studies, four comparative clinical trials, 18 cross-sectional studies, 113 prospective cohort studies, 28 randomized controlled trials, 39 retrospective cohort studies. 138 studies reported outcomes after TKA and 45 after THA with 21 of the total reported both. Two reviewers (WSO,ASY) assessed the quality of the included studies using the NICE GATE frame tailored to be a single appraisal tool different interventional study designs[3]. After final analysis the dissatisfaction among patients undergone TKA was 14% (119 studies, CI: 13-16) at short term follow up, 12% (30 studies, CI:10-15) at mid-term follow-up and 8% (17 studies, CI: 6-11) at long-term follow up. The dissatisfaction among patients undergone THA was 10% (48 studies, CI: 8-11) at short term follow up, 4% (11 studies, CI:3-6) at mid-term follow up, and 7% (11 studies, CI: 4-9) at long term follow up. We did a subgroup analysis as follows:

TOTAL KNEE ARTHROPLASTY

The pooled percentage of dissatisfaction from the results of ten studies reporting the number of satisfied patients with TKA and patellar resurfacing was 8%(11 studies, CI:5-11) while the percentage of dissatisfaction after TKA without patellar resurfacing was 8% (10 studies, CI: 4-12). This results are matched with the systematic review and meta-analysis by Grella et al. 2022 who reported no significant difference in satisfaction whether the patella was resurfaced or not [4].

The dissatisfaction percentage after robotic TKA was 3% (two studies, CI: 0-8) and after computer-navigated TKA was 10% (four studies, CI: 5-15). The proportion of dissatisfied patients after custom guide TKA was 8% (four studies, CI: 3-12). Other systematic reviews might have highlighted the better outcomes of robotic and navigation surgeries, but these results should be viewed with caution as the number of RCTs related to these topics were very limited[5][6][7]. Dossett et al conducted an RCT and did not detect any statistically significant difference in dissatisfaction rate between mechanically aligned (18%) and kinematically aligned (4%) TKAs[8].

The pooled percentage of dissatisfaction after posterior stabilized TKA was 13% (seven studies, CI:7-18) and after cruciate retaining TKA was 23% (nine studies, CI:9-37). The pooled percentage of dissatisfaction after medial pivot TKA was 20% (two studies, CI: 4-35). However, the observed difference in dissatisfaction with each of these knee designs may not be clinically significant and hence superiority of one implant over another difficult to glean from patient satisfaction data[9][10].

The percent of dissatisfied patients after TKA based on underlying diagnosis, osteoarthritis vs. rheumatoid arthritis was the same at 12% (72 studies, CI:10-12).

Age does not seem to influence patient satisfaction after TKA. The proportion of dissatisfied patients after TKA was 17% (five studies, CI:10-24) in the less than 55 year age category versus 15% (123 studies, CI:13-16) in patients aged between 55 and 80 years, and 9% (one study, CI:7-12) in patients > 80 years.

TOTAL HIP ARTHROPLASTY

We sought to determine if underlying diagnosis made a difference in patient satisfaction after THA. The proportion of dissatisfied patients was 9% (17 studies, CI:7-11) in patients with hip osteoarthritis, 6% (one study, CI: 3-13) in patients with rheumatoid arthritis, 2% (two studies, CI:0-3) in patients with ankylosing spondylitis, and 7% (three studies, CI: 0-18) in patients with hip fracture undergoing THA.

Age did not appear to affect patient satisfaction after THA either. The proportion of dissatisfied patients aged less than 55 after THA was 5% (seven studies, CI: 3-6), and 9% (55 studies, CI: 8-10) in patients aged between 55 and 80 years.

Based on the limited studies available, the surgical approach may be a factor affecting patient satisfaction after THA. The proportion of dissatisfied patients after anterior approach of the hip for THA was 25% (one study, CI: 11-45) versus 12% (one study, CI: 0-53) after posterolateral approach of the hip. However, the number of studies on the latter was limited for us to be able to draw a concrete conclusion.

Based on the meta-analyses that we performed, the percent of dissatisfied patients, though higher in the TKA group, was acceptably low in patients undergoing total joint arthroplasty. We could not identify any specific patient or surgery related factors that affected patient satisfaction after TJA.

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