

34th Euro-Global Summit on **Cancer Therapy & Radiation Oncology**
 &
 6th International Conference on **Big Data Analysis and Data Mining**
 &
 13th International Conference on **Orthopedics, Arthroplasty and Rheumatology**
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Total knee replacement outcomes in rheumatoid arthritis

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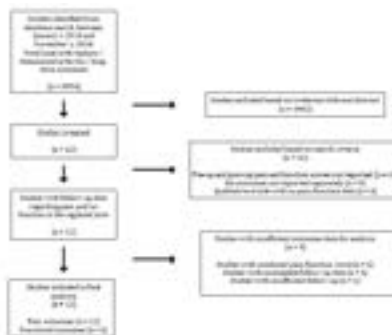
Statement of the Problem: Despite recent advances in the medical management of rheumatoid arthritis (RA), many patients will still progress to end-stage disease requiring joint replacement. Knee replacement in RA may be complicated by recurrent synovitis, systemic inflammation and infection secondary to immunosuppression. These complications may result in chronic pain and functional limitation.

Purpose: The purpose of this study was to examine the incidence of these unfavorable outcomes after total knee replacement in patients with RA.

Methodology & Theoretical Orientation: A MEDLINE review of the literature using was conducted using PubMed, Embase, and Scopus. Relevant articles published between January 2008 and November 2018 was included. The attached flow diagram demonstrates the screening process with exclusion criteria. Twelve studies assessing joint function and five studies assessing pain were included in the final analysis. Downs and black criteria were used to assess the quality of articles.

Findings: Nine out of 12 studies that assessed function and 5 out of 5 studies that assessed pain noted statistically significant mean improvement with knee replacement at follow-up of at least one year. The incidence of unfavorable outcomes varied widely, with studies reporting up to 28% of patients experienced chronic pain and 62% experienced functional impairment after arthroplasty. The most reliable studies, based on Downs and Black quality criteria, reported chronic pain in 10% of patients and functional impairment in 16% of patients after knee replacement.

Conclusions & Significance: Overall, knee replacement is associated with significant improvement in joint pain and function in patients with RA. However, the incidence of unfavorable outcomes varied widely across studies. Further work is necessary to determine potential risk factors for unfavorable outcomes after total knee replacement in patients with RA.



Recent Publications

1. McWilliams D F and Walsh D A (2017) Pain mechanisms in rheumatoid arthritis. Clinical and Experimental

JOINT EVENT

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Rheumatology. 107(5):94-101.

2. Collins N J, Prinsen C A C, Christensen R, Bartels E M, Terwee C B and Roos E M (2016) Knee Injury and Osteoarthritis Outcome Score (KOOS): systematic review and meta-analysis of measurement properties. *Osteoarthritis Cartilage* 24(8):1317-1329.
3. Goodman and Susan M, et al., (2016) Rheumatoid arthritis patients have similar excellent outcomes after total knee replacement compared with osteoarthritis patients. *The Journal of Rheumatology* 43(1):46-53.
4. Fingleton C, et al. (2015) Pain sensitization in people with knee osteoarthritis: a systematic review and meta-analysis. *Osteoarthritis Cartilage* 23(7):1043-1056.
5. Zhu Y, Zhang F, Chen W, Liu S, Zhang Q and Zhang Y (2015) Risk factors for periprosthetic joint infection after total joint arthroplasty: a systematic review and meta-analysis. *Journal of Hospital Infection* 89(2):82-89

Biography

Mark Plantz and Alain Sherman are medical students at the Northwestern University Feinberg School of Medicine in Chicago, Illinois. Dr. Kevin Hardt serves as Assistant Professor of Orthopaedic Surgery at the Feinberg School of Medicine. He has published extensively on the topics of rapid recovery protocols and less-invasive techniques pertaining to total joint arthroplasty.

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