

## **The Impact of Rheumatoid Arthritis on Short-Term In-Hospital Outcomes in Patients Undergoing Total Knee Arthroplasty**

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### **Background**

Rheumatoid arthritis (RA) is a chronic inflammatory disease that often leads to the destruction of many joints including the knee, resulting in the need for arthroplasty. It is known that RA is associated with a higher risk of perioperative complications. However, little data exists on the impact of RA on in-hospital outcomes after total knee arthroplasty (TKA). The objective of this study was to investigate the age of admission, length of stay (LOS), and total charges of patients who had undergone TKA with a known diagnosis of RA.

### **Methods**

This retrospective cohort study utilized the Nationwide Inpatient Sample to identify patients (18+) from 2012-2015 with a primary procedural history of total knee arthroplasty. ICD-9 codes were used to identify patients with Rheumatoid Arthritis (RA), and exclude patients with missing identifiers (age, gender, death). Data analyses assessed hospital age of admission, length of stay (LOS), and total hospital charges. Statistical analysis was performed using independent sample t-tests.

### **Results**

We identified a total of 482,462 patient encounters during the study who underwent TKA. 17,047 (3.5%) had a comorbid diagnosis of RA. Patient encounters with an underlying diagnosis of RA had significantly lower age of admission (61.99 yrs vs 62.79 yrs;  $p < .001$ ), significantly higher LOS (3.44 days vs 3.34 days;  $p < .001$ ) and significantly higher total hospital charges (\$53,345.49 vs \$52,174.58;  $p < .001$ ).

### **Conclusion**

When comparing outcomes for TKA patients with RA, age of admission was significantly lower, while LOS and total hospital charges were significantly higher than in patients without RA. It has been shown previously that patients with RA undergoing TKA demonstrated increased rate of perioperative complications such as post-operative infections and joint dislocations (Ravi, et al.). Physicians should be cognizant and consider the role of pharmacological management and implant choice in managing perioperative complications in this higher-risk population.

<https://www.ncbi.nlm.nih.gov.proxy.kcumb.edu/pubmed/?term=24504797>

[https://www.uptodate.com/contents/total-joint-replacement-for-severe-rheumatoid-arthritis?sectionName=Infection&search=lupus%20surgical%20complications&topicRef=1826&anchor=H21&source=see\\_link#H21](https://www.uptodate.com/contents/total-joint-replacement-for-severe-rheumatoid-arthritis?sectionName=Infection&search=lupus%20surgical%20complications&topicRef=1826&anchor=H21&source=see_link#H21)