

Study compares racial disparities in unilateral versus bilateral knee replacement

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Disparities in unilateral knee replacement surgery have been well-documented, with lower utilization and higher complication rates among African American patients. While previous studies have focused on single knee replacement surgery, researchers at Hospital for Special Surgery (HSS) set out to determine if racial variations exist for same-day

bilateral knee replacement, as well.

"In our retrospective analysis, we found the utilization rate of bilateral knee [replacement](#) was much lower in African American patients compared to white patients," said Bella Mehta, MBBS, a rheumatologist at HSS. "On the other hand, although African Americans having unilateral knee replacement have been shown to have higher in-hospital complication rates compared to white patients, this pattern was not consistent for bilateral knee replacement during the [time period](#) we studied." She presented the findings on November 9 at the American College of Rheumatology annual meeting, which took place virtually.

Dr. Mehta and colleagues compiled information from the National Inpatient Sample (NIS) - Healthcare Cost and Utilization Project (HCUP) database from 2007 to 2016. They looked at trends in utilization and major in-hospital complication rates of unilateral versus bilateral knee replacement nationwide in patients age 50 and older.

Investigators assessed racial differences over time, adjusting for age, sex and comorbidities; hospital variables, including hospital volume, number of beds, region and teaching status; and community level factors, such as median household income.

From 2007 to 2016, 5.5 million unilateral and 276,000 bilateral knee replacements were performed in the United States. The percentage of bilateral knee replacements declined from 5.53% in 2007-08 to 4.03% in 2015-16.

The researchers found that African Americans were much less likely to undergo a double knee replacement compared to white patients during the years analyzed. In-hospital complication rates varied throughout the study period, with no significant difference between African American and white patients.

To explain the study findings concerning complication rates, Dr. Mehta said there could be a more rigorous patient selection process when considering candidates for same-day bilateral knee replacement.

Regarding the lower number of African Americans having the bilateral procedure, she said physicians may be offering it less often to African American patients or they may be choosing not to have the procedure.

"Since the [complication](#) rate for bilateral [knee](#) replacement is not higher for African American patients, health providers should work to provide access to all appropriate patients," Dr. Mehta said. She noted that future studies could take a closer look at the patient selection process or assess the role of an individual's health insurance plan in utilization of the bilateral procedure.

"As we seek to achieve health equity for our patients, we must understand the challenges they face in accessing care, as well as variance in their outcomes," said Michael Parks, MD, an orthopedic surgeon at HSS and study author. "Our ultimate goal is to provide the same quality of care to everyone."

Provided by Hospital for Special Surgery

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