AAHKS Patient Education Committee

Racial and Ethnic Disparities in Hip and Knee Arthroplasty

What are the issues with racial and ethnic disparity?

Healthcare disparities are differences in the quality and access to healthcare across racial, ethnic, and socioeconomic groups. These inequities may lead to delays in treatment, inferior patient outcomes, decreased quality of life, and increasing healthcare costs. The Center for Disease Control and other governing bodies have made reducing these healthcare disparities a major public health goal.

Recently, the issue of racial disparity among hip and knee replacement patients has been a growing area of interest. Disabling osteoarthritis, the main indication for a total joint replacement, is at least as prevalent among African Americans and Hispanics as among non-Hispanic whites (1,2).

Unfortunately, minority communities undergo total joint replacement at a significantly lower rate. From 2012 – 2019, according to the American Joint Replacement Registry, 74% of TJR patients were white, 5% were African American, and 17.6% were unreported ethnicity (3). A recent study confirmed this, showing that non-Hispanic whites comprised almost 75% of total hip replacement/arthroplasty patients, much higher than their proportion in the standard United States population (4). Numerous studies have also shown a decreased rate of African Americans undergoing total knee replacement/arthroplasty compared to non-Hispanic whites (5,6).

In addition, although African American patients come to the office initially with more severe osteoarthritis, there is a 35% longer wait between the first consultation until joint replacement surgery (7). Ethnic minority groups also show lower utilization rates of revision surgeries, likely reflecting a decrease in access to more highly trained arthroplasty specialists (8).

Why are we seeing these disparities?

Minority populations have been suggested to have inferior outcomes after total joint arthroplasty in some studies. One such study showed that patient reported outcomes were significantly lower in non-white patients (9). This difference is not fully understood but likely has many reasons and factors associated with these lower outcome scores. Possible reasons include delay to surgery until a more advanced arthritis and the fact that minorities are more likely to undergo joint replacement at low-volume hospitals. These hospitals are less likely to employ specialized surgeons with joint replacement fellowship training and are also less likely to utilize patient-care protocols to address outcomes after surgery. There is also question as to whether racial minorities have higher readmission and complication rates compared with white populations (9). Further investigation is needed into these topics to draw a firm conclusion and plan to rectify such negative differences.

There are several factors that contribute to these disparities in utilization and outcomes.

- A general lack of trust in the healthcare system plays a large role.
- The commonly cited Tuskegee Experiment, where African Americans were deprived of treatment to study the long-term effects of syphilis, along with other historical events, contribute to feelings of uncertainly and mistrust.
- Underrepresented communities also have limited access to quality healthcare due to insurance constraints.
- Fewer orthopedic surgeons in minority communities as well as socioeconomic and geographic factors.

Among potential candidates for joint replacement, African American patients have significantly lower expectations for surgical outcomes when compared to white patients (10).

African Americans, however, have been shown to be more willing to undergo joint replacement with enhanced education of the surgical procedure and expected outcomes. These factors underscore the need for a physician workforce that reflects the community and communicates effectively to foster a trustworthy patient-physician relationship.

How do we fix this problem?

To eliminate these disparities, we need to continue to better understand contributing factors. Fortunately, research into this area has grown over the last 10 years. Increasing public and physician awareness of racial and ethnic disparities, expanding health insurance coverage, training physicians to practice in medically underserved communities, and increasing the knowledge base on causes and treatments to reduce disparities will be key to overcoming these issues.

Efforts are being made to reach these goals. The American Association of Hip and Knee Surgeons (AAHKS) will continue to educate surgeons and patients about the role of joint replacement. The organization recently formed a Diversity Advisory Board (DAB) to focus on increasing the understanding of these complex issues and help provide solutions. Educating surgeons to be better prepared to meet the needs of their patients will be integral in addressing racial and ethnic disparities. Funding research to further investigate healthcare disparities among the joint replacement community will benefit all parties to further individualize care for each patient to improve outcomes.

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This article has been written by Obi Adigweme, MD in collaboration with the AAHKS Patient and Public Relations Committee and peer reviewed by the AAHKS Evidence Based Medicine Committee. Links to these pages or content used from the articles must be given proper citation to the American Association of Hip and Knee Surgeons.