

Do men have a higher risk of infection after knee replacement?

Q: We allowed my aging father to have a knee replacement. He's diabetic and overweight so we weren't sure this was such a good idea. Then he got an infection in the joint and the new knee implant had to be removed. Afterwards, we were told that men do have a higher rate of infection after knee replacements . We also found out that diabetics have more problems like this. What's your take on all this?

A: Researchers at the very large and very well-known Kaiser Permanente health care system in California conducted a recent study that may offer you some helpful information. They reviewed the medical records of 56,216 patients who had a total knee replacement in their health-care system. They collected information from the charts about the patients, the diagnosis, the surgeon, the surgery, and the hospital.

The first question they asked (and answered) was: how often does this happen? Turns out that about 0.72 per cent of the total 56,216 patients developed the kind of deep joint infection being studied. And this rate was very close to what has been reported in other similar studies.

After analyzing all the data, they were able to identify some specific patient and hospital risk factors. They also point out some protective factors that might be used in the future to reduce the number of deep joint infections. Some risk factors for postoperative infection are modifiable (something can be done to change the risk) while others are nonmodifiable (cannot be changed).

For example, they found that patients of a Hispanic background actually have a lower risk of infection after joint replacement. On the other hand, men have a much higher risk compared with women. But obviously, there isn't anything that can be done to change these two (nonmodifiable) risk factors except warn the patients of the possibilities. And not all men get infections so this one factor isn't the whole story.

Age (young versus old) does not seem to make a difference but body mass index (BMI) and diabetes both increase the risk of deep infection following knee joint replacement. These are considered modifiable patient-related risk factors. There were also a few surgical-related risk factors such as longer operative time and the use of antibiotic-laden cement.

Protective surgical factors include lower annual hospital volume (fewer patients seen each year) and having both knees replaced at the same time. Bilateral knee replacement is preferred by only a small number of select patients who must be pre-approved for this procedure by their physician.

In conclusion, this very large study including many different ages, races, and patient characteristics offered some insight into the problem of (and solutions to) deep joint infection after a knee replacement. Overweight patients who have diabetes and men should be advised that their risk of infection is increased by these factors.

Reference: Robert S. Namba, MD, et al. Risk Factors Associated with Deep Surgical Site Infections After Primary Total Knee Arthroplasty. In *The Journal of Bone and Joint Surgery*. May 2013. Vol. 95A. No. 9. Pp. 775-782.