

Knee implants designed specifically for female patients may not improve outcomes

March 21 2013

Anatomic differences between male and female knees have resulted in the creation and regular use of gender-specific implants. However, a new study presented today at the 2013 Annual Meeting of the American Academy of Orthopaedic Surgeons (AAOS) finds that a specialized prosthesis may not improve overall outcomes in female total knee replacement (TKR) patients.

Female implants are narrower, with an atypical angle and a thinner anterior flange (front rim), reflecting the unique characteristics of the female knee. These knee components are used frequently in TKR procedures in women, who represent 60 percent of all TKR patients.

In the study, researchers evaluated 1957 TKRs between 2006 and 2010 in women with 1515 (77.4 percent) utilizing female specific implants, compared to 771 TKRs from 2002 to 2006 prior to the availability of the gender component. Radiographs were reviewed for component fit, and clinical outcomes.

While there was less overhang of the [knee implant](#) with use of the female-specific prosthesis, improvements in patient knee range of motion, knee flexion (how far you can bend your knee), lateral release rates (reflecting kneecap movement), and [pain scores](#) were comparable in each of the two groups.

"While we certainly use (the female components) frequently (in surgery), we don't detect any objective improvement in [clinical](#)

[outcomes](#), including pain scores and range of motion," said lead study author and [orthopaedic surgeon](#), Alexander P. Sah, MD. "At the same time, there was no detectable disadvantage of using the implant, such as increased blood loss or component migration.

"Benefits of using the gender-specific component may not be detectable by current measures, or may not exist at all. However, the additional size option definitely provides the surgeon with more flexibility during surgery and that is useful," said Dr. Sah.

Provided by American Academy of Orthopaedic Surgeons

Citation: Knee implants designed specifically for female patients may not improve outcomes (2013, March 21) retrieved 25 April 2024 from <https://medicalxpress.com/news/2013-03-knee-implants-specifically-female-patients.html>

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