Patella Resurfacing in TKA

In this issue, we examine a study published in 2001 in the Journal of Bone and Joint Surgery that examines the usefulness of patella resurfacing in total knee arthroplasty.1

SUMMARY
Patellar resurfacing in TKA seems to be a controversial issue. Suggested parameters in guiding the decision on whether to perform patellar resurfacing in TKA include: patient height and weight, the presence of anterior knee pain preoperatively, and the grade of chondromalacia encountered intraoperatively.

Postoperative patellofemoral pain has been attributed at one time or another to patellar resurfacing or the lack thereof. This prospective, randomized, double-blind study with 5- to 7-year follow-up, was comprised of 67 patients (93 knees) who underwent total knee arthroplasty. The purpose of the study was to investigate the indications for patellar resurfacing in TKA.

The indication for surgery was severe osteoarthritis in which nonoperative treatment was ineffective. Exclusion criteria included: previous tibial osteotomy or surgery involving the extensor mechanism; history of septic arthritis or osteomyelitis; severe medical disability limiting the ability to walk; disabling joint disease in another lower-extremity joint; inflammatory arthropathy; and severe deformity.

All patients received the same posterior-cruciate-sparing prosthesis. Randomization was done by opening a randomly selected envelope in the operating room after the femoral and tibial cuts had been made and immediately prior to patellar preparation. All procedures were performed with the same approach and technique. When resurfacing was performed, a cemented, 3-peg, all-polyethylene component was used. When resurfacing was not performed, patelloplasty was done.

Evaluations were performed preoperatively and postoperatively at 6 months, 12 months, and annually thereafter. At all visits, Knee Society clinical score was obtained in a double-blind fashion and then recorded.

Average preoperative Knee Society clinical score was 88.5 points, the average score for pain was 44.5 points, and the average score for function was 41.8 points. Average Knee Society clinical score at the time of final follow-up was 165.4 points, average score for pain was 88.4 points, and the average score for function was 77.1 points.

The authors found no significant differences between resurfaced and nonresurfaced patellae with respect to the Knee Society pain score ($P = .77$), function ($P = .16$), and total ($P = .36$) or the assessments of patellofemoral function ($P = .36, 0.94$, and $0.99$).

Obesity, the degree of patellar chondromalacia, and preoperative anterior knee pain did not predict either a lower postoperative knee score or postoperative anterior knee pain.

The authors also reported that there is an approximately equal likelihood that anterior knee pain will develop postoperatively regardless of whether patellar resurfacing is performed.

The authors believe that the study may only be specific to the implant or the surgical techniques used. However, they maintain that anterior knee pain is an important clinical issue following TKA.

REFERENCE
REVIEW
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The incidence of patella resurfacing during total knee arthroplasty (TKA) varies by geography. In the United States, for example, the majority of knee replacements are tricompartmental, whereas in Europe, TKA without patellar resurfacing is more routine.

The literature is unclear regarding when patellar resurfacing should be performed and if it is beneficial during knee replacement surgery.

Surgeons who favor resurfacing point out that they replace the patella to prevent the need for revision surgery for postoperative anterior knee pain. Others have pointed out that numerous complications may result after routine patella resurfacing.1-3

Unfortunately, the answer remains unclear as to which patients would benefit from patella resurfacing. The decision rests on the individual surgeon’s training and intuition rather than on evidence-based medicine. Thus, large-scale, randomized, clinical control trials are needed to help guide our current clinical decisions regarding patella resurfacing during TKA.

REFERENCES


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