Guest editorial

Patient satisfaction after total knee replacement—still a challenge

In the 1990s patients reported outcome measures (PROMS) were developed to reduce the risk of bias if outcome is rated by the surgeon. When the Swedish Knee Registry sent out a mail in 1999 to validate their registry to check the revision status of the patients, they included a simple question “How satisfied are you with your knee replacement?” 95% of all patients responded and were clearly less positive than expected. Robertsson et al. (2000) reported that 17% of total knee replacement (TKR) patients were either dissatisfied or uncertain with respect to the operation had been performed during the 15-year period. The proportion of satisfied patients was affected by the preoperative diagnosis, patients operated on for a long-standing disease more often being satisfied than those with a short disease-duration. There was no difference in proportions of satisfied patients, whether they had primarily been operated on with a total knee arthroplasty (TKA) or a medial unicompartmental arthroplasty (UKA). For TKAs performed with primary patellar resurfacing, there was a higher ratio of satisfied patients than for TKAs not resurfaced, but this increased ratio diminished with time passed since the primary operation. Unrevised knees had a higher proportion of satisfied patients than knees that had been subject to revision, and among patients revised for medial UKA, the proportion of satisfied patients was higher than among patients revised for TKA.

We conclude that satisfaction after knee arthroplasty is stable and long-lasting in unrevised cases and that even after revision most patients are satisfied.
alignment techniques. However, in unbiased studies none of these techniques and implants have shown a significant improvement of patient satisfaction.

The gap between the satisfaction rates of THR and TKR may be caused by the more complex nature of the knee joint compared to the hip. The anatomy of the knee ligaments and the individual form and size of femur, tibia and patella may be better addressed with a customized patient specific prostheses implanted with a surgical robot to optimize precision (Namin et al. 2019, Robinson et al. 2019). Both developments are underway and may lead to a paradigm shift in TKR necessary to overcome the high percentage of dissatisfied patients. It is very important to analyze patients experiences when introducing these techniques. Based on the expected considerable increase of costs of the TKR procedure health economics also need to be studied.

Until real improvements are achieved, we orthopedic surgeons should be humble and realistic. TKR is a good, but not ideal, option for patients with significant complaints due to end-stage arthritis. We need to be careful in young patients, those with unbearable pain for which narcotics are used, and patients who want to resume high level sports activities. Reduction of pain and improvement of function may be expected but some complaints may persist. There are also possible complications including infection and thrombosis, which occur in less than 5% of patients, but may create more problems than preoperatively.

Pain relief and improving physical function are the main aims of TKR. Expectations should be explicitly addressed before surgery; a lesson now 20 years old, yet still true today.

Jan Verhaar
Department of Orthopaedics and Sports Medicine,
Erasmus University Medical Center Rotterdam,
the Netherlands
E-mail: j.verhaar@erasmusmc.nl

Bourne R B, Chesworth B M, Davis A M, Mahomed N N, Charron KD. Patient satisfaction after total knee arthroplasty: who is satisfied and who is not? Clin Orthop Relat Res 2010; 468(1): 57-63.

Bryan S, Goldsmith I J, Davis J C, Hejazi S, MacDonald V, McAllister P, Randall E, Suryaprabhu N, Wu A D, Sawatzky. Revisiting patient satisfaction following total knee arthroplasty: a longitudinal observational study. BMC Musculoskelet Disord 2018; 19(1): 423.

Conner-Spady B L, Bohm E, Loucks L, Dunbar M J, Marshall D A, Noseworthy T W. Patient expectations and satisfaction 6 and 12 months following total hip and knee replacement. Qual Life Res 2020; 29(3): 705-19.

Dunbar M J, Richardson G, Robertson O. I can’t get no satisfaction after my total knee replacement: rhymes and reasons. Bone Joint J 2013; 95-B(11 Suppl A): 148-52.

Ghomrawi H M K, Lee L Y, Nwachukwu B U, Jain D, Wright T, Padgett D, Bozic K J, Lyman S. Preoperative expectations associated with postoperative dissatisfaction after total knee arthroplasty: a cohort study. J Am Acad Orthop Surg 2020; 28(4): e145-e150.

Gunaratne R, Pratt D N, Banda J, Fick D P, Khan R J K, Robertson B W. Patient dissatisfaction following total knee arthroplasty: a systematic review of the literature. J Arthroplasty 2017; 32(12): 3854-60.

Namin A T, Jalali M S, Vahdat V, Bedair H S, O’Connor M I, Kamarthi S, Isaacs J A. Adoption of new medical technologies: the case of customized individually made knee implants. Value Health 2019; 22(4): 423-30.

Robertsson O, Dunbar M, Pehrsson T, Knutsson K, Lidgren L. Patient satisfaction after knee arthroplasty: a report on 27,372 knees operated on between 1981 and 1995 in Sweden. Acta Orthop Scand 2000; 71(3): 262-7.

Robinson P G, Clement N D, Hamilton D, Blyth M J G, Haddad F S, Patton J T A. Systematic review of robotic-assisted unicompartmental knee arthroplasty: prosthesis design and type should be reported. Bone Joint J 2019; 101-B(7): 838-47.

Tilbury C, Haanstra T M, Leichtenberg C S, Verdegaal S H, Ostelo R W, de Vet H C, Nelissen R G, Vliet Vlieland T P. Unfulfilled expectations after total hip and knee arthroplasty surgery: there is a need for better preoperative patient information and education. J Arthroplasty 2016; 31(10): 2139-45.

Vissers M M, Bussmann J B, Verhaar J A, Busschbach J J, Bierma-Zeinstra S M, Reijnman M. Psychological factors affecting the outcome of total hip and knee arthroplasty: a systematic review. Semin Arthritis Rheum 2012; 41(4): 576-88.

Vissers M M, de Groot I B, Reijnman M, Bussmann J B, Stam H J, Verhaar J A. Functional capacity and actual daily activity do not contribute to patient satisfaction after total knee arthroplasty. BMC Musculoskelet Disord 2010; 11: 121.