Surgeons have widely disparate views on how to improve outcomes for patients following total knee arthroplasty. Over the past decade we have witnessed a remarkable transformation of the entire process of care surrounding total knee arthroplasty. The entirety of the patient experience after contemporary total knee replacement in 2015 is markedly different from that encountered by patients just a decade ago. Ten years ago most patients were treated in a traditional sick-patient model of care and because they were assumed to require substantial hospital intervention, many cumbersome and costly interventions (e.g. indwelling urinary catheters, patient-controlled-analgesic pumps, autologous blood transfusion, continuous passive motion machines) were a routine part of the early postoperative experience. Today the paradigm has shifted to a well-patient model with a working assumption that once a patient has been medically optimized for surgery then the intervention itself, knee replacement, will not typically create a sick-patient. Instead it is expected that most patients can be treated safely and more effectively with less intensive hospital intervention. While as orthopaedic surgeons we are enamored with the latest surgical techniques or interesting technologies most busy surgeons recognize that advances in perioperative pain management, blood management, and early-mobilization therapy protocols account for the greatest share of improvements in patient experience over the past decade.

With that paradigm shift in the hospital/surgical part of the total knee experience comes renewed interest and emphasis on function after TKA. Most surgeons are well aware of a “satisfaction gap” between the results of total hip replacement and total knee replacement. While studies report varying percentages (based on the definition of satisfaction and particular patient populations) what is clear is that 10-20% of patients are not fully satisfied after knee replacement. Researchers have highlighted some of this discordance with the introduction of the Forgotten Joint Score. These researchers and others can consistently point to higher satisfaction or fewer residual symptoms in patients who have undergone hip arthroplasty versus knee arthroplasty. What is also interesting to note, however, is that even amongst otherwise healthy control patients there are more baseline symptoms referable to the knee than to the hip. This may indicate that with knee arthroplasty we are chasing a more elusive target than is the case in hip arthroplasty.

Most surgeons today would agree that alignment plays an important role in TKA function and survival, but certainly factors other than alignment are also important in determining the survival of modern total knee replacements. The evidence suggests that ideal alignment after knee replacement is probably very specific for any given patient and influenced by individual differences. There is a complex interplay between limb alignment, component rotation, sizing, ligament balance, and gait dynamics. Moving forward, more attention needs to be devoted to function in knee replacement in order to improve patient satisfaction. While the mechanical axis has been useful, future improvements are dependent on hitting better targets. The historic focus on radiographic outliers to explain total knee failures has been incomplete at best and has possibly dulled and constrained our collective intellectual curiosity.
References:


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