

Femoral component malrotation and arthrofibrosis after total knee arthroplasty: cause and effect relationship?

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Dear Editor,

We read with great interest the article “Femoral component rotation and arthrofibrosis following mobile-bearing total knee arthroplasty” by Boldt et al. [1]. The authors have brought out a rather oversimplified explanation to a complex problem, and we do have certain concerns regarding the methodology and conclusions drawn.

First, the definition used by the authors in the inclusion criteria to describe arthrofibrosis seems to be synonymous with restriction of movement, which is rather arbitrary. Arthrofibrosis is a clinico-pathological condition occurring as a result of periarticular fibrosis that limits the range of motion by forming scar tissue between the quadriceps mechanism and the distal femur, and the authors have themselves used this definition in the discussion section of the article. Hence, to label any patient with less than 90 degrees of movement as having arthrofibrosis is inappropriate. The timing of diagnosis of arthrofibrosis has also not been given. After how much time from the surgery was the diagnosis of arthrofibrosis established?

Second, femoral internal malrotation is a known cause of limitation of range of movement in addition to certain other factors such as tibial alignment in the coronal and sagittal plane, sagittal alignment of the femoral component (flexion), joint line elevation, patellofemoral stuffing and postoperative rehabilitation protocol [2]. No mention has been made regarding these factors that have an independent ‘cause and effect’ relationship with postoperative knee stiffness, and to arrive at the conclusion that only femoral internal rotation was the cause for limited ROM without evaluating these confounding variables is not scientific.

Third, a variety of surgical procedures were done in the ‘arthrofibrosis’ cohort to improve the clinical function, but sadly no mention has been made as to how many patients indeed had periarticular fibrosis intra-operatively. This piece of information would have been very useful for the readers.

Last, we do not agree with their suggestion that for the tibia-cut-first method, an abnormal amount of femoral component internal rotation may be needed to balance the large medial gap and create a well-balanced knee in flexion, since it would lead to patellar complications, and a constrained prosthesis may be a better choice in such a scenario.

A reply to this comment can be found at <http://dx.doi.org/10.1007/s00264-006-0302-9>.

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