AB138. 10. A report of 8 cases of polyethylene spinout/dislocation in the ATTUNE mobile-bearing rotating-platform total knee arthroplasty

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Background: The low contact stress (LCS) mobile bearing (MB) rotating platform (RP) knee system has an excellent clinical track record and proven survivorship. The advantage of RP knees is that the bearing can rotate as the knee flexes, this allows for a more natural motion and may reduce the stress and wear on the implant. The Attune MB RP knee system was designed to provide better range of motion and address the unstable feeling some patients experience during everyday activities, such as stair descent and bending. Spinout/dislocation is a known complication of MB RP total knee arthroplasty (TKA). Aim: To discuss the aetiology, prevention, incidence, and possible risk factors for spinout in Attune knee.

Methods: A retrospective multicenter review of 8 cases of spinout/dislocation in the Attune TKA system. A radiological review comparing pre and post-operative AP and lateral knee X-rays.

Results: Patient factors associated with spinout included female sex (75%) (male-to-female ratio, 1:3) and obesity (50%). The mean age at time of TKA for spinout patients was 69.6 (range, 53–84) years. Spinout was associated with the valgus knee (62.5%) and most occurred within the first month. In 5 (62.5%) patients the direction of spinout was posterolateral. Mean posterior slope angle (PSA) was 7.375° preoperative and 7.25° postoperatively. The mean posterior condylar offset (PCO) was 27.25 mm preoperatively and 28 mm postoperatively.

Conclusions: The surgical technique used for LCS knee when applied to Attune could potentially lead to spinout/dislocation problem. Post-operative XRs confirmed that the knees were loose in extension leading to posterior spinout/dislocation.

Keywords: Attune; total; knee; arthroplasty

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