Paper #43

Total Hip Arthroplasty for Femoral Neck Fracture: What Are the Contemporary Reasons for Failure?

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Introduction: While total hip arthroplasty (THA) for femoral neck fracture (FNF) provides superior outcomes compared to hemiarthroplasty in active, elderly patients, the historical tradeoff has been a higher risk of dislocation. Given the rise in use of THA to treat FNFs in contemporary practice, it is paramount to understand contemporary reasons for failure. We aimed to describe implant survivorship and reasons for failure after THA for FNFs at a single academic institution.

Methods: We identified 218 FNFs (213 patients) treated with THA from 2000-2017 from our institutional total joint registry (over the same period, 2,039 FNFs were treated with hemiarthroplasty). Mean age was 70 years (range: 44-95) and 62% were female. Cemented femoral components were utilized in 39%. Approach was anterolateral in 71%, posterior in 21%, and direct anterior in 8%. Dual-mobility constructs were utilized in 3%. In the remaining patients, femoral head diameter was 28mm in 8%, 32mm in 34%, 36mm in 52%, and 40mm in 2%. We analyzed patient mortality and implant survivorship with Kaplan-Meier survival curves. Mean follow-up was 4 years.

Results: The 5-year cumulative incidence of any revision was 10%. 19 hips were revised for the following indications: postoperative periprosthetic femur fracture (6; 3 uncemented stems, 3 cemented), infection (5), aseptic loosening of the femoral component (3; 2 cemented, 1 uncemented), dislocation (3), iliopsoas impingement (1), and liner dissociation (1). The 5-year cumulative incidence of postoperative periprosthetic femur fractures was 6%, including 8 Vancouver AG, 4 B2, and 2 C fractures. The 5-year cumulative incidence of dislocation was 1.5%.

Conclusions: The 5-year cumulative incidence of any revision after THA for FNFs was 10%, mostly attributed to periprosthetic fracture and infection. Hip instability (1.5% at 5 years) was not as common after FNF with contemporary patient selection, techniques and implants compared to previous series.

Notes