

## **Arthroplasty for Femoral Neck Fracture Can Be Delayed For Treatment with an Adult Reconstruction Surgeon**

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### **INTRODUCTION:**

The modern treatment paradigm for displaced femoral neck fractures favors early arthroplasty for medically optimized patients. Typically, these injuries are managed by the on-call orthopedist regardless of subspecialty training to facilitate prompt care. The aims of this study were to compare outcomes for patients treated with arthroplasty for femoral neck fracture performed by adult reconstruction subspecialized surgeons to those performed by surgeons of other orthopedic subspecialties and to determine if surgery can safely be delayed to accommodate subspecialized care.

### **METHODS:**

A retrospective, single-institution analysis was performed on all patients who underwent hemiarthroplasty or total hip arthroplasty (THA) for displaced femoral neck fracture from 2015 through 2023. Patient demographics, time from admission to surgery, medical complications, surgical complications, and 90-day readmissions were recorded from the medical record. Patients were divided into cohorts based on time from admission to surgery greater or less than 36 hours and if their operating surgeon was classified as a member of the adult reconstruction division versus those with other orthopedic subspecialty affiliations.

### **RESULTS:**

We identified 752 patients who underwent hemiarthroplasty and 509 underwent THA for displaced femoral neck fracture. Almost all included THAs were performed by arthroplasty surgeons (98.4% versus 1.57%). Greater rates of in-hospital complications were not observed when delaying care over 36 hours for surgeries performed by adult reconstruction surgeons compared to those treated by non-adult reconstruction specialized surgeons within 36 hours ( $P = 0.174$ ). Hip-related readmission rates and 90-day mortality did not differ significantly among the four cohorts ( $P = 0.611$  and  $P = 0.257$ ). 91% power was achieved for the outcome of 90-day readmissions.

### **DISCUSSION AND CONCLUSION:**

Delaying arthroplasty for femoral neck fracture up to 36 hours appears to be safe when surgeries are performed by adult reconstruction surgeons. Larger, registry based studies are needed to assess differences in surgical complications between these groups.