

**Cannulated Screws for Nondisplaced Femoral Neck Fractures in Elderly Patients:
A Good Choice**

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Purpose: Our objective was to evaluate clinical outcomes and reoperation rates using cancellous cannulated screws (CCS) for the treatment of nondisplaced or impacted femoral neck fractures in superelderly population. Additionally, we hypothesized that there would be no significant difference in failure and reoperation rates between unrestricted weightbearing (WB) and restricted WB groups.

Method: Patients over 80 years old with an acute, nondisplaced or impacted fracture of the femoral neck (AO/OTA 31.B1.1 and 31B1.2) treated with 3 partially threaded CCSs of 6.5-mm diameter fixation conforming an inverted triangle in a major trauma center with a minimum 12 months of follow-up were included. Descriptive data were collected retrospectively. Postoperative WB restrictions were prescribed depending on the discretion of the operating surgeon: full WB as tolerated, partial WB, and non-WB group, indicated for at least 6 weeks. A functional mobility assessment and radiographic findings were evaluated at 6 weeks, 3, 6, and 12 months after surgery such as complications and reoperation rates. The statistical and comparison analyses were performed for quantitative and qualitative variables and outcomes.

Results: 170 patients were included; 127 (74.7%) were female. The mean age was 86.9 years (range, 80–102 years). Reoperation rate was 8.8% (15) and complications during the follow-up were found in 17 patients (10%). The most common complications were 5 cases of hardware intolerance (2.9%), 2 symptomatic fracture collapse (1.2%), 4 mechanical failure (2.3%) and 2 nonunion (1.2%), where 5 patients required reoperation for hardware removal (2.9%), 2 cases for a re-osteosynthesis (1.2%), and 6 cases for conversion to hip hemiarthroplasty (3.5%). Fracture collapse was appreciated in 27.1% (46) and immediate WB did not show a higher fracture collapse rate ($P = 0.886$). Overall, 70% of patients (117) recovered their ambulatory level of pre-injury. Full WB group showed best mobility at 6 months ($P = 0.034$) but no statistically significant differences were found at 12 months between full WB and restricted WB groups.

Conclusion: Superelderly patients treated for a nondisplaced femoral fracture with CCS have low reoperation and conversion to hemiarthroplasty rates. Immediate weightbearing is not related to collapse and higher complication risk, and it improves early functional outcomes.