

Effect of Post-Operative Weightbearing on Intracapsular Femoral Neck Fractures Treated with the Femoral Neck System: A Comparative Cohort Study

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Introduction. This study aimed to compare the outcomes of patients treated with the Femoral Neck System (FNS) as a function of their postoperative weightbearing protocol, as post-operative weightbearing is currently controversial.

Methods. A comparative cohort study of patients with femoral neck fractures who underwent fixation with the FNS at a Level I trauma center from 2019 to 2023 was conducted. Patients were categorized into weightbearing-as-tolerated (WBAT) vs. toe-touch-weightbearing (TTWB). Primary outcome measures were post-operative complications and revision surgery. Secondary outcomes included visual analog scale (VAS) pain score, SF-12 score, and Western Ontario and McMaster Universities Osteoarthritis (WOMAC) score. Because FNS is a novel implant procedure that is increasingly being used at our institution, no power analysis was conducted.

Results. There were 25 patients in the WBAT group and 19 in the TTWB group. There were no statistically significant demographic differences between the two groups; average age was 70 years. Eight of 25 (32%) fracture union complications occurred in the WBAT cohort compared with 4 of 19 (21%) in the TTWB group ($p = 0.507$). Revision surgeries were required in 7 of 25 (28%) patients in the WBAT cohort compared with 3 of 19 (16%) in the TTWB group ($p = 0.474$). No statistically significant differences were observed for VAS pain scores, SF-12 scores, or WOMAC scores.

Conclusions. There were no statistically significant differences in radiographic complications, reoperations, or functional outcome scores between the two post-operative weightbearing protocols. Our findings suggest that WBAT may be permitted in this patient cohort.