Title: Early Weightbearing After Operative Ankle Fracture: A Retrospective Review

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Background: Ankle fractures are common injuries often treated with open reduction and internal fixation (ORIF). Traditional post-operative management includes prolonged immobilization and weightbearing (WB) restrictions, which can extend up to three months. However, immobilization can lead to muscle atrophy, decreased mobility, and financial hardship due to delayed return to work. With advancements in modern implants and surgical techniques, early WB protocols may offer comparable outcomes while expediting recovery.

Objective: To evaluate the safety and outcomes of early WB (<6 weeks) compared to delayed WB (>6 weeks) following ankle ORIF in a Medicaid patient population.

Methods: A retrospective review was conducted on patients undergoing ankle ORIF by a single surgeon from 2019 to 2023. Inclusion criteria encompassed bimalleolar equivalent, bimalleolar, and trimalleolar fractures. Outcome measures included rates of wound complications, hardware failure, and need for additional surgery. Statistical analysis was performed using chi-squared tests to compare complication rates between early and delayed WB groups.

Results: A total of 236 patients (126 females, 110 males; mean age 44.5 years) were included. Fracture distribution comprised 53 (22%) trimalleolar, 63 (27%) bimalleolar, and 120 (51%) bimalleolar equivalent fractures. The average time to WB was six weeks. Complications included 10 (4.2%) superficial infections, 3 (1.2%) deep infections, and 1 (0.4%) loss of reduction. No significant difference in complication rates was observed between early and delayed WB groups ($p=0.97$).

Conclusion: Early WB following ankle ORIF did not increase complication rates in this cohort. These findings challenge the traditional approach of prolonged immobilization, suggesting that early WB may be a safe and effective strategy for promoting quicker return to function and reducing economic burden. Further research with prospective studies and patient-reported outcome measures is warranted to optimize post-operative protocols.