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In-Hospital and 3-Month Outcomes of Extramedullary Versus Intramedullary Fixation of AO Type 31-A1 Trochanteric Fractures: An Analysis of Dutch Hip Fracture Audit Data

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Purpose: The use of intramedullary fixation of AO type 31-A1 fractures is rising, despite evidence of non-superiority when compared with extramedullary fixation. The aim of this study was to evaluate the use and outcomes of extramedullary fixation (EMF) versus intramedullary fixation (IMF) in Dutch hospitals during the initial hospital stay and until 3 months after trauma.

Methods: Data on patient characteristics, mobility, living status, complications, reoperation, and mortality were extracted from the Dutch Hip Fracture Audit Indicator Taskforce. Data were collected for patients (>65 years) at baseline, at discharge, and at 3-month follow-up.

Univariate analysis was used for comparing the EMF versus IMF groups.

Results: A total of 836 patients were included; 138 (16.5%) were treated with EMF and 698 (83.5%) with IMF. No significant differences were found between groups for the overall complication rate during the initial hospital stay (EMF: n = 55 [40%] vs IMF: n = 270 [39%]).

Patients treated with EMF showed better mobility at discharge (mobility with frame/2 supports or better, EMF 77% vs IMF 50%), but otherwise no significant difference was found after a 3-month follow-up (EMF 80% vs IMF 82%), suggesting faster improved mobility for IMF. Subgroup analysis of only institutionalized or community dwelling patients showed no meaningful differences in complications or mobility after three months.

Conclusion: This study showed no meaningful differences between EMF and IMF of type 31-A1 trochanteric fractures during hospital stay and until 3-month follow-up. Despite little differences in outcome and EMF being the treatment option of first choice by the Dutch Hip Fracture guideline, IMF is used in the vast majority of patients.