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PATIENT OUTCOMES FOLLOWING TRAUMATIC FRACTURE OF THE FEMORAL SHAFT. DOES SURGICAL APPROACH INFLUENCE OUTCOMES?

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Background and Aim Lower limb fractures are often associated with poorer patient outcomes. The aim was to describe the 12-month outcomes of bony union, complication rates, health related quality of life (HRQL) and pain following femoral shaft fractures in a trauma registry based cohort.

Methods Data for all patients with an ICD-10 injury code for femur, below the level of neck, admitted between May 2005 and June 2009 were obtained from the Victorian Orthopaedic Trauma Outcomes Registry (VOTOR) database. Data were collected at baseline (patient, injury, x-ray and hospital record details) and 12-months (bony union, complications, pain and HRQL—short form-12 (SF-12) summary scores for physical and mental component summary (PCS-12, MCS-12).

Results 417 femoral shaft fractures (AO-32) were identified in 403 patients (70% male; average (SD) age=37.6(20.6) years). Transport crashes were the most common cause of injury (66%). Simple femoral fractures (51%) were the most common type. Most patients underwent fixation using an antegrade femoral nailing approach (62%). Fracture union was confirmed in 231 patients (average time: 196.5 days), although 45% and 12% demonstrated non-union at 6 and 12-months respectively. 23% of the reviewed cases underwent further femoral surgical intervention including implant exchange, dynamisation and/or bone grafting. There was no association between fixation approach and pain or bone union. The antegrade group had better 12-month physical function scores (PCS-12) ($p<0.001$).

Significance The high rate of delayed union, and the requirement for further surgical intervention in this registry based cohort warrants further investigation in the real world environment.