Long-Term Functional Outcome of Midfoot Fractures

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Summary: Midfoot fractures are uncommon debilitating injuries that remain challenging for the orthopaedic surgeon. Bicolumn injuries of the foot had the worst long-term functional outcome. Increased BMI determined inferior functional status.

Background: Midfoot fractures (MF) are uncommon. The purpose of this study was to evaluate functional outcome in patients treated for MF fractures.

Methods: A prospective analysis was undertaken on a cohort of 129 patients diagnosed with MF between March 2002 and June 2007 at a Level I teaching trauma center. Functional outcome was measured by the Foot Function Index (FFI) and Short Musculoskeletal Function Assessment (SMFA).

Results: Sixty-two patients with 65 operatively treated MF returned valid questionnaires. Thirty-two males and 30 females had a mean age of 44±14 years (range 17–72) and BMI 28.0 (range 17.5–48.9). Mechanism of injury was 31 vehicular accidents, 9 crush injuries, 9 low-energy falls, 9 twist, and 4 high-energy falls or sport related injury. Survey follow-up time averaged 53±20 mo (range 23–93). Based on presence of cuboid and navicular fractures patients were grouped into lateral column injury (LAT, 26/65, 40.0%), medial column injury (MED, 19/65, 29.2%), or bicolumn injury (BIC, 20/65, 30.8%) groups. Average functional status scores were FFI 31.1, Daily 21.8, Emotional 31.5, Arm-Hand 6.8, Mobility 29.0, Dysfunction 23.0, and Bother 24.2. BIC performed significantly worse than MED for all functional scores except Arm-Hand (p

Conclusions: Midfoot fractures are debilitating injuries that remain challenging for the orthopaedic surgeon. Bicolumn injuries of the foot had the worst long-term functional outcome. Increased BMI determined inferior functional status.