



AB157. Ankle fracture open reduction internal fixation in patients with diabetes mellitus: a retrospective review

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Background: Ankle fractures pose a significant public health challenge with approximately 187 ankle fractures per 100,000 population per year¹. Diabetes Mellitus is increasing in prevalence, in Ireland there is an estimated 200,000 patients diagnosed with this condition. Poorly controlled Diabetes Mellitus has been demonstrated to impair healing and contribute to poor postoperative outcomes. The aim of this study was to conduct a retrospective analysis of outcomes in patients with diabetes mellitus that underwent open reduction internal fixation of ankle fractures.

Methods: Data from a Regional Trauma & Orthopaedic Unit was collected from a 10-year period and analysed. Patients were identified using *Hospital In-Patient Enquiry*

(*HIFE*) data. Retrospective chart and radiographic reviews were conducted. Epidemiological data was collected relating to fracture types, surgical procedures performed, peri-operative and post-operative complications, surgical revision rates and mortality.

Results: Forty-one patients over the 10-year period were identified to have ankle open reduction and internal fixation and diabetes mellitus. All patients were previously diagnosed with Diabetes Mellitus prior to presentation; 25% Type 1 DM, 75% Type 2 DM. Bimalleolar ankle fractures were the most frequent injury pattern sustained. There was a 16% wound infection rate in the post-operative period. Similarly there was a 16% readmission rate following surgery.

Conclusions: Ankle fractures are frequently encountered by Trauma & Orthopaedic surgeons. The occurrence of these injuries in the diabetic population poses a significant challenge in the perioperative and postoperative period. We have demonstrated surgical wound infections and hospital readmissions are a significant issue which should be considered when devising a management plan in this patient cohort.

Keywords: Ankle; fracture; diabetes mellitus; open reduction internal fixation

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