

Result: All patients showed significant improvements in the ability to weight bear at one year compared to three months following surgery. 78% and 61% complained of severe pain and stiffness, respectively, one year post-operatively. Of those who responded to a foot and ankle outcome survey, all showed inability to perform strenuous physical activities and found their injury had a direct impact on their activities of daily living.

Conclusion: The study found chronic pain and joint stiffness to be prominent complications in minimally invasive calcaneal fracture repair. These findings confirm that calcaneal fractures have a poor outcome irrespective of technique used.

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1069: THE PROGRESSION OF SEVERE HALLUX VALGUS IN THE ORIENTAL POPULATION IN HONG KONG

K. Koo^{1,*}, L. Fung Tse², H. Shan Cheng², H. Ki Wai². ¹Stockport nhs foundation trust, Stockport, UK; ²Prince of Wales Hospital, Sha Tin, Hong Kong.

Background: Hallux valgus is a common forefoot deformity. Surgical correction has the best outcome but is not without its risks and complications. The study aims to identify whether severe acquired hallux valgus progresses radiologically over time in the oriental population and if surgery provides a satisfactory outcome.

Method: Patients with symptomatic hallux valgus from 2008 to 2013 were reviewed. Radiological angle measurements were taken at initial patient presentation, before surgery and at post-operative follow-up. Patients' basic demographic and radiographic assessment were analysed in accordance to time from presentation to surgery. Post-op complications and patient satisfaction was analysed from follow-up appointments.

Result: The cohort contained 36 patients with a mean age of 64 years old, all presenting with moderate to severe hallux valgus. The average wait for surgery was 705.7 days where the deformity had significantly progressed during this period ($p=0.04$). Complication rates post-op was 23.7% with infection being the most common. Patient satisfaction post-op was 79% as reported on follow up appointments.

Discussion: Severe hallux valgus deformity does progress over time in this cohort. This study suggests that a short waiting time to surgery would be more beneficial to the Hong Kong population who suffer with hallux valgus.

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1100: EARLY WEIGHT BEARING FUNCTIONAL REHABILITATION REDUCES THE RATE OF TENDO ACHILLES RE-RUPTURE: A CASE CONTROL SERIES

C. Prior^{1,*}, M. McLafferty¹, G. Jackson¹, J. Boylan². ¹Wirral University Teaching Hospital, Wirral, UK; ²University of Liverpool, Liverpool, UK.

The management and rehabilitation of acute tendo achilles (TA) rupture is controversial. Traditionally, patients are immobilised for variable periods before rehabilitation in both operatively and conservatively managed ruptures. Recent literature suggests that early weight bearing reduces the rate of re-rupture.

We developed a new protocol led by our physiotherapists based on early functional rehab for both operatively and conservatively managed patients. We compared the rate of re-rupture and other complications with a series of patients managed in non-weight bearing regimes.

Eighteen patients in a control group were treated for acute TA rupture with the old non-weight bearing rehab regime. Three patients had a re-rupture within 6 months of injury (2 surgical vs 1 non-op). 52 patients underwent an early functional rehab protocol (17 operatively vs 35 non-operative). One patient (surgical group) had a re-rupture, demonstrating a statistically significant difference in re-rupture rate between the early and late rehab groups ($p=0.496$).

Physiotherapy-led early functional rehab is safe to use following TA rupture, has cost-saving implications and is more convenient for patients.

This series supports the evidence that early weight bearing reduces the risk of re-rupture.

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1114: MODIFIED LAPIDUS ARTHRODESIS FOR SEVERE HALLUX VALGUS DEFORMITIES USING AN INTRA-OSSEOUS FIXATION IMPLANT – A PRELIMINARY REPORT

K. Shah^{*}, M. Ahmed, H. Havard, M.A. Fazal, S. Shahid, P. Ray, D. Park. Royal Free London NHS Foundation Trust, London, UK.

Background: A modified Lapidus arthrodesis is a commonly accepted treatment for severe hallux valgus deformities. We present our initial experience using an intra-osseous implant (IoFix, Extremity Medical, NJ, USA) as a method of fixation.

Method: Medical records and radiographs were reviewed for all patients who underwent surgery between April 2009 and April 2014. Patient reported outcome measures using the Manchester Oxford Foot Questionnaire (MOXFQ) and EQ-5D were collected. Radiographic outcomes using the intermetatarsal (IMA) and hallux valgus angles (HVA) were measured.

Result: Twenty-four patients (25 feet) were included in the study. Average follow-up was 8.8 months. Sixteen patients (64%) completed the MOXFQ and EQ5D questionnaires. The average EQ5D scores improved from 0.783 to 0.886 ($p<0.02$). The average MOXFQ score improved from 42.5 (IQR 21.1) to 20.8 (IQR 27.3) ($p<0.01$). The average IMA improved from 16.2° to 10.9°. The HVA improved from 37.9° to 10.9° ($p<0.05$). There were 3 superficial infections (9%) and no non-unions.

Conclusion: Our initial experience with an intra-osseous method of fixation appears to provide suitable outcomes with an acceptable level of complications. The implants' reduced profile and uniform compression is advantageous. Modified Lapidus arthrodesis using the IoFix implant as a method of fixation is an acceptable technique.

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1116: IS TIP-APEX DISTANCE RELATED TO RADIATION USE?

P. Brown^{*}, M. El-Sobky, V. Peter. Royal Liverpool and Broadgreen University Hospital Trust, Mersey, UK.

The importance of the Tip-Apex Distance (TAD) in proximal femoral fracture fixation is well documented and an important technical consideration. We hypothesised that surgeons using longer exposures for a given fracture should achieve better TADs.

We retrospectively analysed fixations for a 12 month period 245 cases were identified. Revisions, devices with more than 1 proximal screw and cases with incomplete data were excluded. TAD in Im devices on average was greater than that for DHS, As was radiation exposure. With both devices, seniority increased TAD on average this was associated with an increase in exposure. There was however no correlation between radiation exposure and TAD across the groups ($R=0.08$).

Consultants particularly with IM devices used substantially more radiation on average (6.2/2.5 mSv) and achieved lower TADs (19.7/ 17.5mm) compared to SpRs. This may well represent a greater complexity of work undertaken it may also represent an unwillingness of trainees to compromise on TAD. We conclude seniority does not result in improved TAD for a given exposure.

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1152: TIMING OF THE ORTHOPAEDIC SURGICAL INTERVENTION IN PATIENTS WITH POLY-TRAUMA: A SYSTEMATIC REVIEW

R. Kabariti^{1,*}, B. Rocos². ¹University Hospital Llandough, Cardiff and Vale Health Board, Cardiff, UK; ²Southmead Hospital, North Bristol Trust, Bristol, UK.

Aim: To assess the effects of the timing of orthopaedic surgical intervention on the incidence rates of acute respiratory distress syndrome (ARDS),