

doi:10.1016/j.injury.2010.07.477

**2A.3****Clinical decision analysis in the management of displaced mid-shaft clavicle fractures: the patient's perspective**

Sukhman Kalra\*, Harry Sprot, Sudiptamohan Mukhopadhyay, K.N. Subramanian, Angus Robertson

Displaced mid-shaft clavicle fractures have traditionally been treated non-operatively. New evidence supports the use of operative treatment with better functional results although with some risk of adverse complications. The patient's opinion in choosing one or the other option of treatment is important especially when a new therapeutic philosophy is introduced. We aimed to obtain the patients' preference based on their opinion of various possible outcomes of each treatment method. A clinical decision tree was constructed based on probabilities for various outcomes from the current literature. We used clinical decision analysis based on Bayesian logic. A similar clinical decision analysis was done for a cohort of orthopaedic surgeons.

We interviewed 20 patients to obtain their health preferences on a numerical rating scale for each of the six possible outcomes for the conservative and operative treatments. Similar health preferences were obtained from 20 orthopaedic surgeons. The cohort of patients was young (age range: 13–21, mean: 16 years) males involved in active sport. The results of the decision analysis demonstrated a strong preference for operative management in this cohort of patients (combined probability of 0.81 for operative treatment versus 0.61 for non-operative).

The cohort of orthopaedic surgeons was either career orthopaedic trainees or qualified orthopaedic surgeons with an age range of 28–41 years (mean age: 35 years). The results of the decision analysis demonstrated a weak preference for operative management in this cohort of surgeons (combined probability of 0.84 for operative treatment versus 0.77 for non-operative management).

Overall the young active patient is eight times more likely to prefer operative treatment over non-operative management compared to the well informed orthopaedic surgeon. Patient education is the key to a better informed patient who can make a balanced decision. Clinical decision analysis can be a useful tool in this process.

doi:10.1016/j.injury.2010.07.478

**2A.4****Radiological outcomes of distal radius extra-articular fragility fractures treated with extra-focal kirschner wires**C. Kennedy (MB, BCH, BAO, MRCS)<sup>a,\*</sup>, M.T. Kennedy (MB, MCh, BAO, MRCS)<sup>b</sup>, D. Niall (FRCSI, FRCS (Tr&Ortho))<sup>b</sup>, A. Devitt (MCh, FRCSI, FRCS (Tr&Ortho))<sup>a</sup><sup>a</sup> Department of Orthopaedic Surgery, University College Hospital, Galway, Ireland<sup>b</sup> Department of Orthopaedic Surgery, Midland Regional Hospital, Tullamore, Co Offaly, Ireland

**Introduction:** The classical Colles fracture (extraarticular, dorsally angulated distal radius fracture) in patients with osteoporotic bone is becoming increasingly more frequent. There still appears to be no clear consensus on the most appropriate surgical management of these injuries.

female patients over 60 years of age, in two orthopaedic centres, under the care of 12 different orthopaedic surgeons. We correlated the radiographic distal radius measurements (ulnar variance, volar tilt, and radial inclination) at the pre-operative and intra-operative stages with the final radiographic outcome.

**Result:** Mean dorsal angulation was 21° at time of presentation. Closed reduction significantly improved fracture position to a mean of 2.7° volar angulation ( $p < 0.05$ ). Mean angulation at time of K-wire removal was 1.6° dorsal, this was not significant in comparison to post-reduction measurements ( $p < 0.05$ ). Mean ulnar variance at time of presentation was 2.5 mm (range 7.4 to –4.2). Reduction improved fracture displacement to a mean of 0 mm, which was statistically significant ( $p < 0.05$ ). Mean ulnar variance at time of K-wire removal was 2.4 mm ( $p < 0.05$ ). 56.8% of cases demonstrated radial shortening of 2 mm or more.

**Conclusion:** In female patients over 60 years of age, the best predictor of radial length, when K-wire fixation is to be used, is the radial length prior to fracture reduction. Thus if there is radial shortening visible in the initial radiographs as measured in terms of ulnar variance, one should consider a method of fixation other than inter-fragmentary K-wires.

**Conflict of interest:** There was no conflict of interest. All the authors disclose there were no financial or personal relationships with other people or organizations, that could inappropriately influence our work. No grant or funding was received for the above study.

doi:10.1016/j.injury.2010.07.479

**2A.5****Inner city gunshot injuries: south London experience**

R. Mansouri\*, K. Tsitskaris, S. Gudipati, V. Kavarthapu

King's College Hospital, United Kingdom

**Background:** The Metropolitan Police figures in 2009 suggest a 23% decrease in the incidence of injuries related to offensive weapons in London compared to 2002. We conducted a retrospective analysis of extremity gunshot injuries over a 1-year period. Our aim is to report on our (1) incidence, (2) experience in treating these injuries and (3) complications.

**Methods:** Over a 1-year period (2008–2009), 27 extremity gunshot injuries in 23 patients were identified and case notes reviewed retrospectively. The following were identified and analysed: fracture patterns (AO classification), treatment (operative/non-operative), complications and patient compliance.

**Results:** Our results show a 15% increase the rate of extremity gunshot injuries compared to data from 2002. Two-third of our injuries were managed non-operatively. Complications were as follows: four wound infections, one delayed union, one compartment syndrome, one vascular injury and three nerve injuries. Outpatient compliance was below average.

**Conclusion:** Our data suggests that extremity gunshot injuries are on an increase in the south London highlighting the need for trauma surgeons' knowledge of the management of these injuries. This group of patients have poor compliance and one should take this into account when treating these injuries in outpatient setting.

doi:10.1016/j.injury.2010.07.480