1B.31
Hip precautions after hemiarthroplasty for intracapsular fractures—what is happening in the UK and at what cost?
R. Fox, R. Halliday, S. Barnfield, J. Roxburgh, J. Dunford, T.J.S. Chesser
Department of Trauma & Orthopaedic Surgery, Frenchay Hospital, North Bristol NHS Trust, Bristol, BS16 1LE, United Kingdom

Aim: Primary aim: To observe current practice of the use of hip precautions following hemi-arthroplasty for displaced intracapsular neck of femur fracture in trauma receiving hospitals in England. Secondary aim: To audit the cost of hip precautions one hospital.

Method: A telephone review was undertaken of all units identified by the National Hip Fracture database as receiving centres for hip fractures across England to ascertain current practice in the use of hip precautions. A prospective audit of Occupational Therapy (OT) practice including the cost of equipment provision and OT time was carried out locally.

Results: 156 of the 192 centres were successfully contacted (81%). Practice varied between centres but hip precautions were in use at 70% of centres. In those centres not using hip precautions, audit demonstrating low dislocation rate or a review of the literature were the most commonly reported reason for change in practice. In centres reporting hip precautions being under review, ‘Consultant resistance’ was the most frequently reported barrier to change in practice.

Prior to stopping hip precautions at the local hospital, we audited the costs associated with their use. Requirement for OT home visits decreased by 18%, mean equipment costs per patient decreased £11.62 and mean OT time per patient decreased 1.5 h following removal of hip precaution guidelines. A mean of 0.24 days discharge delay due to equipment provision was identified prior to removing hip precautions with no discharge delay following.

Conclusion: There is no evidence that hip precautions are required after hemiarthroplasty. This study has highlighted the variation in practice across the country and inconsistency with the literature published by the BOA & BGS in the Blue Book and the potential to better utilise the Occupational Therapy resources available.


1B.32
Day 1 surgical failure in DHS fixation for intertrochanteric fractures
Ravi Badge, Abigail Whitehouse, H. Mamoowala, J. Doyle, B. Ilango
Fairfield General Hospital, Bury, BL9 7TD, United Kingdom

Introduction: Hip fracture is the commonest orthopaedic admission in UK. Approximately 70–75000 hip fractures occur annually. It carries significant morbidity and mortality with 10% of patients die within one month and about one third by a year and also carries significant financial implications. Dynamic hip screw (DHS) fixation for extra capsular fractures is the most routinely performed procedure especially by the junior orthopaedic trainee.

Objectives: The objective of this audit was to analyse

1. Correlation of surgeon seniority to the quality of fixation.
2. Level of agreement between two orthopaedic consultants about the acceptability of primary fixation.

Material and methods: We present a retrospective review of consecutive 87 patients with extra capsular fracture neck of femur treated with standard DHS procedure and analysed the impact of surgeon seniority on acceptability of surgical fixation and possibility of potential failure. The intra-op images were reviewed by two senior consultants on two different occasions to comment on acceptability of fixation. Patients with at least six months since surgery were included in this study.

Results: There were 63 females and 24 males. An average age was 82.14 years (range 49–103). 45 (52%) operated by senior surgeons (Consultant and Associate specialist) and 42 (48%) by the juniors (Junior Registrar and SHO). We identified six surgical failures (7%) on follow-up of which 5 were performed by junior doctors and 1 by senior. Only 1 out of 5 was supervised by Senior.

Review of intra-op images revealed unacceptable fixation in 20% cases of which 75% were performed by junior surgeon. 80% of the unacceptable fixation was done without senior supervision. 7% of patients required revision procedure within 4 months. 17% failures failed within 1 month, 50% within 2, 17% each in 3 and 4 months.

Conclusion: We recommend DHS fixation should be performed under closed senior supervision throughout the procedure. We propose a safety checklist for this group of patients in order to improve the primary fixation and minimise the surgical failures and thus improving mobility, reducing morbidity and mortality following surgery and therefore reducing financial burden.


1B.33
The cephalocervical proximal femoral compression nail—early experience, complication rates and TAD comparison with the dynamic hip screw
R. Barksfield, P. McCann, I. McFadyen
Department of Orthopaedics, Gloucestershire Royal Hospital, Great Western Road, Gloucestershire, GL1 3NN, United Kingdom

Background: The Smith and Nephew Intertrochanteric Antegrade Nailing System (InterTAN) was launched in 2006 for the treatment of pertrochanteric fractures. This novel fixation device incorporates an integrated cephalocervical compression screw system providing greater rotational stability. The importance of tip apex distance (TAD) was established for the dynamic hip screw by Baumgarten and extrapolated to cephalomedullary nails by Shyam-Kumar. No such record exists for cephalocervical compression systems. We investigated the impact of this integrated compression screw system on device placement and failure, evaluating performance against traditional dynamic hip screw fixation (DHS).

Methods: Patients admitted with pertrochanteric fractures between September 2008 and April 2009 were identified. A retrospective review of casenotes and radiographs for patients undergoing InterTAN or DHS fixation was undertaken (n=25 in both groups). Data regarding comorbidity, fracture pattern, operating time, complications and TAD were collected and analysed.

Results: Median age was 85 in both groups (p=0.81) with a male:female ratio of 10:40. Fractures were 31A1 (30%), 31A2 (50%), and 31A3 (14%). 31A1 fractures tended to be managed with DHS (11 vs 4, p=0.03) whereas all 31A3 fractures were managed by InterTAN nailing (p=0.01); with 31A2 fractures evenly distributed between operative groups (11 vs 14, p=0.57). The mean TAD in both operative groups was 21 mm and did not differ statistically between groups (p=0.94). The mean anaesthetic times were 87 min and 88 min in DHS and InterTAN groups, respectively (p=0.91). The mean time to follow up was 10 months (11 DHS:9 Intertan). The only significant complication was varus collapse in one case (DHS).

Conclusion: The TAD for both implants was within recommended limits and hence complications were minimal.
Our experience suggests that this device is an excellent treatment option for the management of unstable pertrochanteric fractures without significant increase in operative time or complication rate.


Femoral reconstruction nail failures following fixation of extra-capsular fractures of the hip—incidence, causes and prevention
J.D. Craik, J. Lloyd, L. Koziol, L. O’Hara
Department of Trauma and Orthopaedics, Poole General Hospital, UK

The proximal femoral nail is a valuable tool for fixation of extracapsular fractures of the hip. Its position in the medullary canal imparts a biomechanical load sharing advantage over extra-medullary load bearing fixation devices. It can also provide stable fixation of subtrochanteric fractures whilst minimising soft tissue trauma, blood loss and risk of wound infections. However, the complication rate associated with this fixation method has been estimated in the literature to be 5–10%. This is associated with both significant patient morbidity and financial expense.

We conducted a retrospective audit assessment of all of the proximal femoral nails (PFN) performed at the Dorset County Trauma Centre based at Poole Hospital, UK. The audit period ran from June 2008 to May 2009. The hospital’s trauma database identified 56 patients who received PFNs for unstable, extracapsular hip fractures. The mean patient age at the time of surgery was 84 years. Approximately equal numbers of short (46%) and long (54%) PFNs were used. In total, 13 (23%) patients experienced complications relating to fracture fixation, including intra-operative breach of the anterior femoral cortex, peri-implant fracture, dynamic screw cut out, locking screw fracture and locking screw back out. 9 of these patients required further surgery with either conversion to total hip arthroplasty (6 patients) or removal of metal work (3 patients). The mean time to recognition of post-operative complications was 8 months.

The tip apex distance of failed PFNs was greater than 25 mm in 62% of patients, compared with only 26% for successful PFNs. Well reduced fractures had a greater success rate (91%), compared with imperfectly reduced (70%) and poorly reduced fractures (60%). There was no significant relationship between failure rates and fracture configuration according to the Seinsheimer classification.

In summary it is clear that in order to minimise the risk ofPFN failure, both optimising fracture reduction and tip–apex distance is required, and these factors may have a greater impact on fixation failure than the fracture configuration.


1B.35
Correlation between MRI and arthroscopic findings in pathology of the menisci: closing the loop with a re-audit
W.B. Sprenger De Rover, Darren Klass, Andoni Toms, Tom Marshall, John Cahir, Richard Goodwin
Norfolk & Norwich university hospital, UK

The purpose of this audit was to assess the sensitivity and specificity of MRI vs Arthroscopic findings for meniscal pathology and compare this to previous results in 2005. The changes with regards to reporter demographics, outsourcing and funding changes were taken into account.

A Retrospective data collection was done for period 01/01/2009–13/08/2009 for patients undergoing MRI pre-operatively (<3 months). The mean age was 41 ranging from 12 to 34. N=212. Male to female ration 1.6:1.

The results showed that the sensitivity had reduced from 94%(2005) to 88%(2009). Specificity however had increased from 90%(2005) to 94%(2009).

3 reports were non-committing of meniscal pathology in the 2009 sample compared to 6 in 2005. Of these 33% had pathology in 2009 and 50% had pathology in 2005. These changes were thought to be multi-factorial.

There was still a high sensitivity and specificity. The decrease in sensitivity could have been due to poor image quality relating to outsourcing scanners.

This study confirmed that MRI is still an excellent diagnostic tool for assessing menisci and that increasing SpR reporting in our region had no significant impact on accuracy.


1B.36
Establishing a new trauma and emergency medicine department in a level 1 hospital covering 3 million persons
Razieh Jafari, Zahra Katayion Bamdad
Beheshti University of Medical Sciences, Tehran, Iran

In the east of Tehran a level 1 referral university affiliated general hospital with 540 beds is covering about 3 million persons and taking care of about 220–250 patients every 24 h in the trauma and emergency department. It has been approved from 10 years ago that Anglo-American style for emergency medicine and trauma system should be used.

Reaching to this goal demanded changing pattern of management, treatment and education by building two separate sections, Trauma unit and Emergency department close to each other, therefore the medical staff were switched to Emergency Medicine Specialists who have been trained in the united states and another university in Tehran.

The trauma unit has the full facilities such as 2 operating rooms, radiology, sonography and CT scanning, laboratory, CPR and burn room.

The emergency department handles the non traumatized emergent patients, so it has a 6 bed ICU,6 bed CCU,CPR and a 24-bed ward for managing the patients before discharge or transfer to related wards.

The curriculum for treatment and education has been copied from American models but had some modification to work in local situation, in the triage room the patients are sorted by a nurse and according to the etiology and manifestations are treated by a team of emergency medicine specialists and related specialty.

We were able to decrease the mortality rate in traumatized patients from 16% to 9% and increase the successful CPR rates for non injured patients from 42% to 64%.


1B.37
The fall of IM nail. The changing pattern of tibial shaft fracture surgical management and the impact on training
K. Tsang, J. Page, P. Mackenney
James Cook University Hospital, Middlesbrough, UK

Aim: The surgical management of an extra-articular fracture of the tibia can be done by internal fixation with plate, intramedullary (IM) nailing or external fixator. The decision of choosing what