of 9.5 after recommencement of warfarin and needed reversal therapy.

Discussion & conclusions: We conclude that patients on warfarin with INR 2–3 should stop their warfarin 4 days prior to surgery while patients with INR 3–4.5 should stop their warfarin 5 days prior to elective surgery. This is to avoid unnecessary cancellation and delay in operation. Meanwhile, we recommend that emergency admission patient should have their INR reversed on admission to shorten the delay from admission to operation and improve the outcomes in this group of patient.


1B.14

Post-operative reduction in haemoglobin is related to rise in Troponin T following hip fracture surgery

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Background and objective: Patients undergoing hip fracture surgery have a high peri-operative mortality rate. We performed a retrospective study to ascertain if there is any relation between post-operative reduction in haemoglobin (Hb) and cardiac related events following the surgery.

Methodology: We carried out a retrospective study in this University Hospital’s trauma unit. All patients operated for fracture neck of femur (Hemi arthroplasty and Dynamic Hip Screw) between 1st August 2006 and 31st July 2008 were included in the study.

Electronic records from the trauma unit, pathology portal, operating theatre and blood bank were obtained to identify the pre-operative and post-operative Hb levels, amount of blood transfused and Troponin T (TnT) level.

Results: A total of 621 patients were operated for fracture neck of femur during the study period of which 605 patients had complete perioperative blood results (DHS: 341; 80 males and 261 females and Hemi arthroplasty: 264; 66 males and 198 females). Sixty patients had TnT levels performed within 10 days of surgery, thus suggesting possible cardiac related symptoms. Of these, 25 patients had a raised TnT (≥0.03). Twenty four patients (96%) with raised TnT had a post-operative reduction in Hb compared with 540/580 (93%) patients without TnT rise (mean 2.3, range 0.1–5.6 g/dl and mean 2.5, range 0–7 g/dl respectively).

Scatter diagram illustrated a positive correlation between post-operative reduction in Hb and TnT rise at the 10% level of significance (p = 0.064).

Conclusions: Post-operative Hb drop correlates with a raised TnT. As a standard protocol, post-operative bloods including Hb are performed the day after surgery. Given the correlation demonstrated, we recommend Hb levels to be analysed on the day of surgery, to effectively manage low Hb levels before cardiac complications can develop.


1B.15

Bipolar hip arthroplasty—are they ever converted to a THR?

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Bipolar arthroplasty of the hip has been used for the treatment of primary hip arthritis, but is most commonly now employed in the management of fractures of the proximal femur. The dual articulation of the heads is commonly cited to be advantageous for reasons of decreased acetabular erosion, lower dislocation rates and ease of conversion to total hip arthroplasty should the need arise.

The published literature refutes the proposed benefits of erosion and dislocation, and demonstrates equal functional outcomes to monopolar hemiarthroplasty but no literature exists regarding the incidence of conversion of bipolar arthroplasty to total hip arthroplasty. As bipolar arthroplasty is significantly more expensive than monopolar arthroplasty, its cost-effectiveness is questionable unless the only remaining benefit i.e. conversion to THR justifies its expense.

We reviewed all bipolar arthroplasty performed in our unit for hip fracture over the last 10 years. Of all 164 patients reviewed with a minimum of 1 year from date of surgery, 4 patients had undergone conversion of their bipolar prosthesis into total hip replacements. Only one of these 4 patients underwent conversion to total hip replacement due to groin pain. The remaining patients underwent conversion for infection, dislocation and fracture (one of each). As the cost of the bipolar implants is 5.3 times than the cost of our unipolar implant, and modern unipolar implants allow for easy extraction and conversion, we conclude that the use of bipolar arthroplasty for the reasons of planned conversion to future total hip replacement cannot be justified. If functional gain is desired, the literature supports the use of THR.


1B.16

Acute renal dysfunction following hip fracture

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We investigated the incidence, risk factors and outcome of acute renal dysfunction (ARD) in patients with a fractured neck of femur.

170 consecutive patients were prospectively included in the Scottish Hip Fracture Audit database and retrospectively analysed. Historically, lack of consensus definition has hindered accurate reporting of ARD. ARD was defined using the ‘RIFLE’ criteria.

27 patients (16%) developed ARD. Risk factors were male sex, vascular disease, hypertension, diabetes, chronic kidney disease and pre-morbidity use of nephrotoxic medications (p < 0.01). Inpatient, 30- and 120-day mortality was higher in the ARD group 19%, 22% and 41% respectively, versus 0%, 4% and 13% in the non-ARD group (p < 0.01). Length of hospital stay was significantly longer in the ARD group. Pre- and post-operative complications were 12 and 5 times more frequent respectively in the ARD group (p < 0.01).