superior to microvascular decompression in clinical outcome, complication-rate and cost-effectiveness?

**Methods:** Of 107 articles revealed in a systematic search, nine of these articles demonstrated the best evidence to answer the clinical question by directly comparing MVD against SRS. Clinical outcomes and complication-rate and cost-effectiveness was compared for both procedures.

**Results:** Five out of nine studies demonstrated superiority for MVD in achieving pain relief versus SRS. Two studies demonstrated that SRS has a lower complication-rate than MVD decompression. In terms of re-intervention rate and cost-effectiveness, evidence was conflicting with equal numbers of studies favouring each procedure.

**Conclusion:** Overall, MVD appears to achieve superior clinical outcomes relating to pain relief, however is associated with higher complication-rates than SRS. Evidence is conflicting regarding intervention-rate and cost-effectiveness, and further work is required in this area.

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**1060: DECISION MAKING IN METASTATIC SPINAL CORD COMPRESSION (MSCC)**

Ashah Hakim 1, Matthew Crocker 2, Timothy Jones 2, 1 St George’s University of London, London, UK; 2 Akkinson Morley Department of Neurosurgery, St George’s Hospital, London, UK.

**Aim:** MSCC occurs in 5–14% of cancer patients, requiring timely multi-disciplinary decision making. MSCC scoring systems (SS) have been proposed as potential adjuncts. Our aim was to compare agreement between surgeons, the MDT and scoring systems.

**Methods:** 10 MSCC cases (history/examination/imaging) were presented to 8 neurosurgeons (NS) and 3 orthopaedic spinal surgeons (OSs). They decided whether a case required surgery, oncotherapy or palliative care. The decision of each specialty was compared to the MDT decision for each case (nominated as ‘gold standard’) as well as accepted MSCC SS (Tokuhashi, Tomita and Bauer) using inter-rater agreement (kappa) scores.

**Results:** Variation in decision making was observed between groups. Agreement (with MDT) was highest with OSS and Bauer scoring (κ=1 and κ = 0.82 respectively). OSS agreed with Bauer scoring (κ=0.49) whilst NS agreed with Tokuhashi scoring (κ=0.38). Inter-group variability was observed; consultant OSS with highest agreement (κ=1), NS consultants (κ=0.39) and registrars (κ=0.31). A single surgeon reported use of SS in practice.

**Conclusion:** The observed variability indicates that MSCC-MDT decisions may be influenced by the type of spinal surgeon present. The observed variability may be reduced by more surgeons attending the MDT or by applying a validated SS (e.g. Bauer).

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**1327: THE IMPLICATION OF DELAYS IN PATIENT DISCHARGE: THE EXPERIENCE OF A NEUROSURGICAL CENTRE**

Arif Zafar, Parag Sayal, Anthony Jesurasa, Chittoor Rajaraman. Hull Royal Infirmary, Hull, East Yorkshire, UK.

**Aim:** Neurosurgery being a tertiary specialty has many patients referred from neighbouring hospitals electively and emergently. Consequently discharge and repatriation of these patients is of paramount importance. Our aim was to look at the effect of delay in patient discharge /transfer and to assess the financial impact of these delays and identify areas of improvement.

**Method:** We carried out a prospective study of all elective and emergency patients admitted over a 6 week period. We carried out a subsequent costing audit to determine potential revenue losses.

**Results:** Overall delay was 321 bed nights and cost analysis revealed the financial cost to be at least £180,000. This however does not take into account additional funds which would have been received by further elective and emergency work during this lost period. Taking projected losses into account, we estimate a total loss of over £460,000 over the 6 week period.

**Conclusions:** We found a significant financial impact of delay in patient repatriation. In the current financial environment, these revenue losses can hamper service delivery and expansion. We are therefore aiming to negotiate and implement discharge /transfer pathways with referring hospitals. These may serve as useful template for other similar specialties.

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**1504: IMPROVING VENOUS THROMBOEMBOLIC PROPHYLAXIS PRESCRIBING ON A NEUROSURGICAL WARD**

Anokha. University Hospital of Wales, Cardiff, UK.

**Introduction:** Hospital acquired VTE accounts for 25,000 preventable deaths annually in the UK. The aim of the audit was to implement a simple, cost effective intervention to improve prescribing of VTE prophylaxis on a neurosurgical ward.

**Guidelines:** The January 2010 NICE guidelines were used to audit the number of patients receiving adequate venous thromboembolic (VTE) prophylaxis.

**Method:** On three separate occasions we audited if in-patients on the Neurosurgical ward had been prescribed VTE prophylaxis. Following this we introduced a VTE prophylaxis assessment stickers into the drug charts of all patients over a two week period. We then re-audited the ward to see if the intervention had improved VTE prophylaxis prescribing.

**Results:** On the first three assessments prior to the intervention 20%, 15% and 12% of patients had not been given sufficient VTE prevention cover. After the sticker intervention in the drug charts, there was 100% adherence to VTE prophylaxis.

**Conclusion:** Introduction of the VTE sticker is a simple maneuver that has shown a dramatic improvement in prescribing VTE prophylaxis. This cost effective initiative will reduce the number of VTE events on our wards and improve our patient management.
and the overall level of patient satisfaction following wrist replacement was high.

This study confirms encouraging short to medium term results following Universal-2 wrist replacement although longer term follow up is required.

0040: IMPROVING THE PREOPERATIVE CARE OF PATIENTS WITH FEMORAL NECK FRACTURES THROUGH THE DEVELOPMENT AND IMPLEMENTATION OF A CHECKLIST

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Aim: To increase the performance of vital preoperative tasks, by senior house officers, in patients admitted for femoral neck fracture operations by producing and implementing a checklist as an aide memoire.

Methods: Twelve vital preoperative tasks were identified. A baseline audit of 10 random patients showed that the mean proportion of the 12 tasks completed was 53% (range 25%–83%). A survey of 14 nurses and surgeons found that the majority of respondents agreed that there was a problem with the performance of most of the tasks. The tasks were incorporated into a checklist which was refined in three plan-do-study-act cycles and introduced into the femoral neck fracture pathway.

Results: In the week following the introduction of the checklist, 77% of the checklist tasks were completed, 24% more than at the baseline audit (53%). In week 3, the completion of checklist tasks rose to 88% and to 95% in week 4.

Conclusions: A simple checklist can markedly improve the performance and recording of preoperative tasks. We recommend the wider adoption of the new checklist to be produced as a sticker for patients' medical records. Further study is required to ascertain the effect of the checklist on clinical outcomes.

0055: PRE-OPERATIVE ANAEMIA AND LENGTH OF HOSPITAL STAY FOLLOWING ELECTIVE TOTAL HIP REPLACEMENT AND TOTAL KNEE REPLACEMENT

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This was a retrospective case-control study to establish the effect of pre-operative anaemia on prolonged hospital stay following total hip replacement (THR) and total knee replacement (TKR).

188 consecutive cases of THR and TKR were selected from a theatre register. The following parameters were evaluated to assess impact on the length of hospital stay: (LOS); patients’ age, patients’ gender, type of operation (THR or TKR) and pre-operative and post-operative haemoglobin (Hb).

Study population was divided by LOS (<4 or >4 days) and characterised by Mann-Whitney U test and Chi-square test as appropriate. The mean pre-operative Hb for patients who stayed 4 or fewer days was 13.56 g/dL (Standard deviation 1.23) whereas those who stayed longer than 4 days was 12.71 g/dL (Standard deviation 1.16) (p< 0.0001).

In univariate analysis, pre-operative Hb had a statistically significant influence on the length of hospital stay (OR 0.556; CI 0.42-0.734; p<0.0001). Further, after adjusting for age, gender and type of surgery, using multivariable regression analysis, pre-operative Hb still had a statistically significant influence on the length of hospital stay (Adj. OR 0.6; CI 0.443-0.811; p< 0.001).

In conclusion, pre-operative Haemoglobin has a statistically significant influence on the length of hospital stay following THR and TKR.

0076: METAL ON METAL (MOM) HIP ARTHROPLASTY: ABDUCTION ANGLE, ARC OF COVER, AND METAL ION LEVELS: A SEVEN YEAR FOLLOW UP IN NORTHERN IRELAND

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The literature describes varied results of resurfacing procedures dependent upon implant type and position. In particular associations have been drawn between implant position, blood metal ion levels and implant failure rates. Our study aimed to determine any correlation between metal ion levels, implant abduction angle, and arc of cover in a followed up patient cohort over seven years.

Data was collected on cobalt and chromium blood levels, implant abduction angles, and implant arcs of cover in patients who underwent MoM hip arthroplasty in our institution.

58 patients were identified. 48 underwent Birmingham hip resurfacing, 8 underwent total hip replacements, and 2 hip resurfacing underwent revision procedures to non metal on metal articulations. There was a significant correlation demonstrated between acetabular component abduction angle and blood metal ion levels in those patients undergoing hip resurfacing procedures.

Cobalt ion levels showed a stronger correlation with abduction angle than chromium ion levels. Whilst correlation approached significance there was not a statistically significant correlation between arc of cover and blood metal ion levels. Cobalt ion levels showed a stronger correlation with abduction angle than chromium ion levels.

In conclusion, metal ion levels in the blood show a significant correlation with acetabular component orientation.

0102: DOES OBESITY INCREASE THE RATE OF RECURRENT HERNIATED NUCLEUS PULPOSUS AFTER LUMBAR MICRODISCECTOMY?

Conal Quah, Grant Syme, Girish Swamy, Shashi Nanjayan, Andrew Fowler, Dennis Calthorpe. Royal Derby Hospitals, Derby, UK.

Introduction: Given the rising incidence of obesity in the adult population, it is inevitable that orthopaedic surgeons will be treating more obese patients with lumbar disc pathologies. The relationship between obesity and recurrent herniated nucleus pulposus (HNP) following microdiscectomy remains unclear.

Objectives: To investigate the relationship between obesity and recurrent herniatio of nucleus pulposus (HNP) following lumbar microdiscectomy.

Methods: A retrospective review of case notes from 2008–2011, conducted for all patients that underwent one level lumbar microdiscectomy, performed by a single surgeon. The standard criteria for microdiscectomy was used. Patient demographics, including BMI, were collected from notes.

Results: A total of 283 patients were available for analysis: 190(67%) were in the non-obese group and 93 (32.9%) in the obese group. The average BMI was 28.1 and the average length of stay was 1.3days. Dural leak was seen in 11 patients(3.9%) out of which 8(4.2%) occurred in the non-obese group and 3(3.2%) in the obese group [p=0.04]. Recurrent symptomatic HNP was seen in 27(9.5%) patients confirmed by MRI scan. 19(10%) were in the non-obese group and 8(8.6%) in the obese group [p=0.8].

Conclusion: Obesity was not a predictor of recurrent HNP after lumbar microdiscectomy and did not have increased complication rates compared to the non-obese group.

0108: LONG TERM SURVIVORSHIP FOLLOWING SCORPIO TOTAL KNEE REPLACEMENT

Alexander Martin, Conal Quah, Grant Syme, Neil Segaren, Simon Pickering, Royal Derby Hospital, Derby, UK.

Introduction: The Scorpio total knee replacement (TKR) is one of the most commonly used prosthesis in the United Kingdom. Concern has arisen regarding an increase in revision rates. No other study has looked at the long term survivorship of this prosthesis.

Methods: This study population consisted of 456 consecutive patients who underwent a primary Scorpio TKR between 1998-2003 in a single institution. Patients underwent clinical, using WOMAC and Oxford Knee score at 5 years and 97.4% at 14 years. Survival analysis for the prosthesis was performed by a single surgeon. The standard criteria for microdiscectomy was used. Patient demographics, including BMI, were collected from notes.

Results: A total of 283 patients were available for analysis: 190(67%) were in the non-obese group and 93 (32.9%) in the obese group. The average BMI was 28.1 and the average length of stay was 1.3days. Dural leak was seen in 11 patients(3.9%) out of which 8(4.2%) occurred in the non-obese group and 3(3.2%) in the obese group [p=0.04]. Recurrent symptomatic HNP was seen in 27(9.5%) patients confirmed by MRI scan. 19(10%) were in the non-obese group and 8(8.6%) in the obese group [p=0.8].

Conclusion: Obesity was not a predictor of recurrent HNP after lumbar microdiscectomy and did not have increased complication rates compared to the non-obese group.