1153: A COST ANALYSIS OF TRANSURETHRAL RESECTION OF THE PROSTATE AND LASER PHOTOSELECTIVE VAPORIZATION OF THE PROSTATE

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Introduction: The aim of this study is to assess the cost effectiveness of the 120W HPS photoselective vaporization of the prostate (PVP) in comparison with transurethral resection of the prostate (TURP).

Methods: 60 PVP procedures performed over a 3 year period (Feb 2009 – July 2011) were compared with 60 TURP procedures performed during the same time period. The focus of the paper was primarily on the potential cost saving with the PVP procedure due to a shorter inpatient hospital stay.

Results: Of the 120 procedures performed, 60 were PVPs while 60 were TURPs. 15 (25%) PVPs were performed as a day-case procedure, while 45 (75%) were performed as an in-patient procedure. The median length of stay for a PVP in our institution is 4 days (range 0 – 29 days). The median length of stay for TURP is 7 days (range 3 – 26 days). In our institution, the mean cost of a TURP is £11,200, the mean cost of a PVP is £7,300 while the day case PVP costs £2,800.

Conclusions: This study highlights the potential savings to public hospitals with a shorter in-patient hospital stay for patients undergoing the PVP procedure.

VASCULAR/ENDOVASCULAR SURGERY

0042: VALIDATION OF A REGRESSION MODEL TO ACCURATELY DETERMINE THE EFFECTS OF IPSILATERAL CAROTID STENOSIS ON CONTRALATERAL DUPLEX CAROTID VELOCITIES

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Aim: This study set out to validate our multivariate fractional polynomial regression (MFP) model that predicts the effect of carotid endarterectomy (CEA) on contralateral (non-operated) post-operative carotid artery duplex velocity.

Methods: Cross-validation study (callibration/validation data – 43/19; N=62). Predicted post-operative contralateral velocities in a validation cohort having CEA was obtained by applying the pre-existing MFP formula to their pre-operative data. Model validation was assessed with reference to the bias (defined as difference (predicted - actual) contralateral post-operative velocity) and bland altman graphical plots; the median and interquartile range (IQR 25th:75th centile) of the bias were also reported.

Results: The median bias for contralateral ICA PSV, ICA EDV and ICA/CCA PSV ratio were -9 cm/s, -1 cm/s and -0.14 respectively; and the corresponding IQR were (-22:0) cm/s, (-11:4) cm/s and (-0.57:0.12). In each case, the bland altman plots showed increasing confidence intervals of the mean bias as the average (predicted + actual) velocities increased.

Conclusions: Although calibration data suggest that the MFP model may be accurate for determining the effects of the ipsilateral stenosis on the contralateral flow velocities; the widened confidence intervals displayed in the validation plots may yet limit their clinical use. Further research using a larger dataset is required.

0117: THE BUTTON HOLE METHOD OF FISTULA CANNULATION. DOES IT AFFECT PATENCY RATES?

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Objective: The button hole (BH) technique of arteriovenous fistula (AVF) cannulation requires repeated use of a single site to form a mature track. There is little known on how the BH technique affects the patency of AVF. Our aim was to compare patency rates of fistula cannulated by BH compared to ladderling techniques.

Method: Patients commencing haemodialysis through Radiocephalic or Brachiocephalic fistulae were identified. Comparison was made to a control group who used the ladderling method prior to the introduction of BH. Data was collected prospectively. Groups were compared by chi squared, unpaired t-test and log-rank methods.

Results: There were no statistical differences (p=0.05) between BH (n=88) and controls (n=322) with regard to demographics. At 2 years, AVF cannulated by BH had a higher patency rate at all time points (6 months 90.9% vs 81.1%, 12 months 80.4% vs 74.5%, 2 years 73.3% vs 67.1%) but this did not reach statistical significance (p=0.227).

Conclusion: We have shown clinical non-inferiority of the BH technique on AVF secondary patency compared to a standard cannulation technique. Previous studies revealed patient and nursing preference for BH over the ladderling technique and therefore we suggest this should become the first line method of AVF cannulation.

0163: FACTORS AFFECTING LENGTH OF STAY (LOS) IN ELECTIVE AAA SURGERY

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Objective: Vascular Registry data shows that UK elective Abdominal Aortic Aneurysm (AAA) repair patients have the worst length of stay (LOS) data in Europe. This study examines risk factors associated with an increased LOS in AAA surgery.

Methods: We examined 75 consecutive elective AAA repairs performed between 1st September 2009 – 31st October 2010. Pre-operative, intraoperative and post-operative factors were analysed using multinomial regression analysis.

Results: The median LOS was 7 days (2-33) for OS vs. 2 days (1-47) for EVAR. 30-day mortality was 2% for EVAR and there were no deaths for open surgery. 31% of EVAR patients stayed > 3 days and 63% of open surgery patients stayed > 7 days. Factors associated with increased LOS were age over 75 (Chi²= 29.45, p=0.031) and any post-operative complication (Chi² = 35.32, p=0.006) with respiratory infection being the most common complication (7/19 patients). The average LOS more than doubles if any post-operative complication is present (5.6 days versus 11.85 days).

Conclusions: Our study suggests that there may be potential for reducing LOS in elective AAA surgery for patients > 75 yrs and those who may be at risk of post-operative respiratory infection by introducing targeted measures in the Vascular Society AAAQIP.

0168: THE FRESH FROZEN PULSATILE HUMAN CADAVER MODEL. A NOVEL TECHNIQUE FOR TRAINING ENDOVASCULAR PRACTITIONERS. A TRIAL OF FACE VALIDITY

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Aims: Determine the face validity of a pulsatile human cadaver model (PHCM) for training endovascular practitioners.

Methods: 11 endovascular clinicians performed two procedures (catheterisation of the left renal artery and left subclavian artery) on PHCM, and Simbiosion angionmentor virtual reality simulator (SVR). After training participants rated statements relating to their experience on a numerical scale from 1 to 5, with 1 representing the strongest agreement with the statement.

Results: Compared to live patients, candidates scored statements on PHCM favourably regarding “realism of vascular access” (mean 2.27, (SD +/-0.75)); “guide-wire manipulation” (1.36, (+/- 0.48)), “vessel catheterisation” (1.64 (+/-0.64)), and “perforning an angiogram” (2.7 (+/-1.02)). Compared to SVR, candidates scored PHCM favourably, regarding “realism of vascular access” (1.73 (+/-0.75)); “guide-wire manipulation” (2.18 (+/-0.58)), “vessel catheterisation” (1.82 (+/-0.71)), and “performing an angiogram” (2.7 (+/-1.21)). Candidates “preferred training on PHCM” (1.91 (+/-0.67), would “recommend PHCM to others” (1.55 (+/-0.5)) and no candidates “objected to training on human cadavers” (1.64 (+/-0.88)).

Conclusions: This is the first trial in world literature to assess the validity of a PHCM for training endovascular practitioners. It scored favourably compared to both live patients and SVR. The PHCM holds exciting training potential.