injection. One patient with obstructed meaguerater was converted to open technique because of limited working space and relatively large instruments. Mean total operating time was 225 minutes (range: 152-257) and console time 113 minutes (range: 80-150). All discharged on post operative day 1. The catheter and stent were removed on day 7. There were no complications. Ultrasound scan and follow up in 1 and 4 months.

This early experience support the view that robotic assisted intravesical reimplantation is feasible and safe. The ergonomic of tissue handling and suturing were easier, but greater technical challenges can arise from limited working space and size of instruments.

**0980: THE EVOLVING ROLE OF SIMULATORS AND TRAINING IN ROBOTIC UROLOGICAL SURGERY: WHICH ASSESSMENT TOOL TO USE?**

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**Aim:** The evolution of minimally invasive urological surgery from conventional laparoscopy to robotic platforms has entered a new phase, with large numbers of surgical trainees wanting to learn robotic surgery. Currently, there is no consensus on robotic training. We reviewed the present status of robotic training to guide learning.

**Methods:** MEDLINE, EMBASE and the Cochrane Databases were searched from 1999 to 2011 for systematic reviews of randomised controlled trials, prospective observational studies, retrospective studies and case reports on assessment and training in robotic surgery. Studies are needed to provide guidance of robotic-skill acquisition. There are no well-structured prospective studies that correlate the effectiveness of training with patient morbidity or mortality.

**Conclusion:** There is no consensus on the optimal tools to assess the impact of surgical trainees’ learning curve on patient outcomes. Fellowship training remains the most effective way to gain robotic competences. There are three validated robotic simulators but there is need for focused training and assessment pathway guidelines for robotic surgery training.

**0995: UPPER URINARY TRACT UROTHELIAL CARCINOMA: PROGNOSTIC FACTORS**

Talal Atlayeb, Joseph El-Shelika, Sanjeev Katwal, Graeme Cooksey. Urology Department, Castle Hill Hospital, Hull, UK

**Aim:** Upper urinary tract urothelial carcinoma (UTUC) comprises approximately 10% of renal neoplasm. Minimally invasive endoscopic procedures are associated with high recurrent rate; therefore, radical nephroureterectomy (RNU) remains the gold standard. The aim of this study was to examine the oncological outcome of patients with UTUC following RNU.

**Methods:** There were 40 papers found 2 longitudinal studies, 2 case-control studies with the rest editorials and commentaries on robotic surgery training/assessment. There is evidence that fellowship-trained robotic surgeons initially have superior results than non-fellowship-trained counterparts. There are no well-structured prospective studies that correlate the effectiveness of training with patient morbidity or mortality.

**Conclusion:** There is no consensus on the optimal tools to assess the impact of surgical trainees’ learning curve on patient outcomes. Fellowship training remains the most effective way to gain robotic competences. Studies are needed to provide guidance of robotic-skill acquisition. There are three validated robotic simulators but there is need for focused training and assessment pathway guidelines for robotic surgery training.

**0997: TYPE OF ANASTOMOSIS: A COMMON VARIANT AFFECTING HOSPITAL STAY IN RADICAL PROSTATECTOMY?**

Stephanie Guillamier, Savpreet Ubee, Bhupendra Sarmah. Birmingham Heartlands Hospital, Birmingham, UK

**Introduction:** To assess if an interrupted or continuous anastomosis during open radical prostatectomy (ORP) affects the duration of post-operative hospital stay.

**Materials and methods:** 103 consecutive patients underwent an ORRP for localised prostate cancer between 2008 and 2011. 51 patients had interrupted type of vesico-urethral anastomosis (IRP) and the subsequent 52 had continuous anastomosis (CRP). Retrospective data collection was carried out on hospital stay, cystogram, catheter removal, number of lymph nodes excised and urinary continence.

**Results:** Median (Range) of lymph nodes excised was 6(1-23) in IRP and 6(1-19) for CRP. Median day for drain removal for IRP group was 3 and for CRP was 2. The mean hospital stay for IRP was 4 (4.63) and for CRP was 3 (3.32). 47/51 did not show leakage on cystogram in the IRP group. The mean (median) day for catheter removal was 12.1 (11). 46/52 did not show any leak on a cystogram in the CRP group and the mean (median) day for catheter removal was 13.1 (12). Continence was achieved in 6 months by 35/51 in IRP and 40/52 in CRP.

**Conclusion:** In our experience, continuous anastomosis in ORP appears to be a common variant affecting the post-operative hospital stay.

**0998: EXPRESSION PROFILING OF RNA BASED MARKERS OF PROSTATE CANCER IN URINE AND TISSUE SAMPLES**

Eva Bolton, Diarmuid Moran, Armelle Meunier, Laure Marignol, Donal Hollywood, Thomas Hughes Lynch, Antoinette Perry. Prostate Molecular Oncology Group, Trinity College, Dublin, Ireland

**Introduction:** A critical challenge in prostate cancer (CaP) research is integration of molecular markers into routine clinical use. Differential microRNA expression has successfully differentiated CaP from normal tissue. Diagnostic potential also rests in the non-invasive quantification of other RNA species, such as CaP specific PCA3 transcripts and the TMRPSS2:ERG fusion gene mRNA in urine. Expression of CaP related miRs has not been detailed in urine.

**Aims:** (i) profile urinary expression of 13 miRs, definitively up-regulated in CaP, (ii) determine performance in CaP detection in conjunction with and compared to gold-standard urinary markers PCA3 and TMRPSS2:ERG

**Methods:** Relative quantification data on miR microarray analysis of 24 human prostate cell line samples identified over-expressed miR, and validated in 85 FFPE tissue samples. Cellular and cell-free total RNA was isolated from 173 urine samples with suspected CaP. PCA3 and TMRPSS2:ERG expression were quantified relative to PGK1 and miR expression calculated relative to let-7e and miR429 by qRT-PCR.

**Results:** 45% of patients (78/173) have CaP. MiR100 shows 7.9-13.25 fold upregulation in cancer cell lines and tissues relative to benign. Similarly miR-125, miR-24, miR-99a, miR-99b are over-expressed relative to benign. On this basis expression is under investigation using custom TLDs in the urinary cohort.

**1007: IS IT WORTH SAMPLING THE TRANSITIONAL ZONE IN TRANSRECTAL ULTRASOUND GUIDED BIOPSIES OF THE PROSTATE? RANDHAWA K, OBEIDAT S, PETTERSSON BA, POWELL CS. COUNTESS OF CHESTER HOSPITAL**

Karen Randhawa, Samer Obeidat, Bo Adrian Pettersson, Christopher Powell. Countess of Chester Hospital, Chester, UK

**Aim:** The aim of this study was to evaluate the clinical significance of additional routine transitional zone biopsies in patients undergoing transrectal ultrasound-guided prostate biopsies. Comparison was also made between Gleason grading for cancers found concurrently in both the transitional and peripheral zones.

**Method:** Between May and November 2011, one hundred and seventy-four transrectal ultrasound-guided prostate biopsies were performed, using a 12-core systematic approach with two additional transitional zone biopsies. A retrospective case note analysis was performed reviewing histology obtained from biopsies. Factors assessed were: PSA level, number of cores, percentage of prostate cancer found in peripheral zone, transitional zone and Gleason grade of cancers present. Seven were excluded.

**Results:** Of 167 prostate biopsies performed, 81 patients (48.5%) were found to have prostate cancer. Two were transitional zone-confined of Gleason grade 4+3 and 3+3 respectively. In biopsies with concurrent zone
cancers (35 patients) four showed an upgraded Gleason grade in the transitional zone than the peripheral zone. Twenty biopsies confirmed the same Gleason grading in both zones, and eleven biopsies showed a downgrading in the transitional zone.

**Conclusion:** Routine transitional zone biopsies do not significantly increase the detection rate of prostate cancer. However, they do provide information regarding the grading of the cancer which can further impact on management.

**1020: ASSESSMENT OF SYMPTOMATIC OUTCOMES OF SACRAL NEUROMODULATION FOR THE TREATMENT OF DETRUSOR OVERACTIVITY**

Aziz Gulamhusein, Fady Youssel, Rachel Simmons, Sheilagh Reid. Royal Hallamshire Hospital, Sheffield, UK

**Aims:** To assess symptoms in patients who have undergone implantation of the Interstim® neurostimulator using the ePAQ® online questionnaire.

**Methods:** ePAQ® is an interactive online instrument developed in Sheffield. It assesses symptoms relating to the pelvic floor and the impacts on quality of life. Five patients with detrusor overactivity with urinary incontinence refractory to medical management completed the online questionnaire pre and post implantation. Urinary symptoms are calculated. A score of 0 indicates no symptoms, whilst a score of 100 indicates maximum possible symptoms. Urinary symptoms are categorized into: pain, voiding, overactive bladder and stress incontinence. Quality of life is also assessed.

**Results:** All patients completed an ePAQ® score pre treatment and proceeded to percutaneous nerve evaluation (PNE) followed by permanent implantation. One patient had no improvement in symptoms during PNE and elected for intravesical botox treatment. Mean pre implant scores: 48.15 (11-100); Mean PNE scores: 14.05 (0-67); Mean post implant scores: 8.85 (0-33).

**Conclusion:** A significant improvement in symptoms and quality of life in patients receiving permanent neuromodulation implants was seen. The use of ePAQ® provides an efficient and quantitative means to record symptoms. Further patient numbers are required to assess sacral neuromodulation and ePAQ® as an assessment tool.

**1094: SURGICAL MANAGEMENT OF LOCALISED RENAL CANCER: THE CASE FOR LAPAROSCOPIC PARTIAL NEPHRECTOMY**

Bathmapriya Balakrishnan, Benjamin T. Sherwood, Simon T. Williams. Division of Urology, University of Nottingham, Royal Derby Hospital, Nottingham, UK

**Introduction:** Although historically radical nephrectomy has been the mainstay of management for localised renal cell carcinoma (RCC), partial nephrectomy (PN), is now recommended for T1 (<7cm) lesions.

**Aim:** To determine current practice with respect to management of T1 RCC in a tertiary referral unit.

**Methods:** Retrospective case-note review of patients undergoing surgery for T1 RCC (2009-11).

**Results:** Of 57 patients undergoing surgery, 47 (82.4%) underwent laparoscopic radical nephrectomy (LRN) and 9 patients (15.8%) were treated with PN. One patient underwent open radical nephrectomy (ORN). At the time of multidisciplinary registration, partial nephrectomy was only considered in 10 patients (17.5%).

Median length of stay was shorter in LRN (4 vs. 7 days), with fewer complications. Mean increase in creatinine from baseline was 41.0 in patients undergoing LRN/ORN, vs. 12.5 in those undergoing PN (t = 4.3642, p = 0.0011). In the LRN/ORN group, a new decline in eGFR to < 45 was noted in 29% of patients, vs. 11% in the PN group.

**Conclusion:** Mainstay of management for T1 RCC is currently LRN. Whilst a laparoscopic approach provides a LOS advantage and reduces complication rates, the loss of an entire renal unit may give rise to CKD related morbidity.

**1100: HOW TO IMPROVE THE LEARNING CURVE OF COMPLEX PROCEDURES OR NOVEL TECHNIQUES IN LAPAROSCOPY: THE CONCEPT OF WHOLE PROCEDURE EQUIVALENT**

Jonathan Makanjula 1, Paul Rouse 1, A.R. Rao 1, C. Brown 1, Philippe Grange 1. 1 Department of Urology, Transplant and Abdominal Clinical Academic Group, Kings College Hospital, Kings Health Partners, London, UK; 2 Department of Urology, Guys and St Thomas NHS Foundation Trust, London, UK

**Aim:** In a linear model of apprenticeship, easy procedures are allocated to training. By the end of the curriculum little time is left to learn complex procedures for which demand for training is high. These are partly addressed by sequential-modular training. We propose a novel concept of non-sequential modular model “whole procedure equivalent” (WPE).

**Methods:** Laparoscopic-prostatectomy is broken down into steps that can be learnt independently without pre-set orders. Trainee record performance on a developed e-portfolio for each step on every case following feedback. There is a colour code of performance; deep blue when the trainee was in a trainer role, green when a step was completed without supervision and amber when performed under supervision.

**Results:** Six surgeons have trained to proficient level: four were sixth-year fellows and two were senior surgeons in personal development. Each surgeon by the end of the training has performed independently with a smaller number of operations with competency gained through a far larger number of WPE, growing rapidly after 24 cases.

**Conclusion:** By exploring ways of facilitating training in challenging surgical procedures a model of learning complex laparoscopic skills has been designed. The non-sequential model allows for a higher ratio performance/attendance than existing models.

**1109: ANTERIOR MINI PYELOPLASTY FOR ADULT PUJ OBSTRUCTION: A BETTER ALTERNATIVE THAN LAPAROSCOPIC PYELOPLASTY IN SELECTED CASES?**

Oliver Fuge, Malcolm Marquette, Rajiv Pillai, John McLoughlin. West Suffolk Hospital, Bury St Edmunds, UK

**Aim:** Open pyeloplasty is the gold standard treatment for pelviureteric junction (PUJ) obstruction. Laparoscopic pyeloplasty is increasingly becoming a popular alternative but has inherent difficulties with laparoscopic suturing and this can often affect the final outcome. We describe a technique of anterior mini pyeloplasty which carries the advantage of minimally invasive surgery and is as effective as the standard open pyeloplasty.

**Method:** 12 patients underwent open mini pyeloplasty at our centre for PUJ obstruction. The surgical technique involved approaching the PUJ through an anterior muscle splitting 3-4 cm transverse incision.

**Results:** Mean patient age = 56, average BMI=23; mean operation time=129 minutes; mean decrease in post op Hb = 14 mg/dl; median hospital stay 3.6 days. None of the patients required parenteral analgesia after day 2. All symptomatic patients were symptom free postoperatively. All patients showed an improvement in drainage on postoperative MAG3 renogram.

**Conclusions:** Anterior mini pyeloplasty is quite popular in children but this is the first presented series in an adult population. It has all the advantages of minimally invasive surgery and has comparable efficacy to that of standard open pyeloplasty. We conclude that anterior mini pyeloplasty is safe and successful in selected cases.

**1150: OPTIMAL MANAGEMENT OF DETRUSOR UNDERACTIVITY IN MEN WITH SYMPTOMS SUGGESTIVE OF BENIGN PROSTATIC OBSTRUCTION**

Aziz Gulamhusein, Sampi Mehta, Derek Rosario. Royal Hallamshire Hospital, Sheffield, UK

**Aims:** To evaluate whether urodynamic assessment of patients with chronic urinary retention following a period of clean intermittent self-catherization (CISC) would allow better management of patients with detrusor underactivity (DU).

**Methods:** Forty eight patients were recruited. Retention was initially relieved with indwelling catheterization. Patients were subsequently taught CISC and reviewed at three months. Patients with resuming motor or sensory bladder activity proceeded to urodynamics. Those with confirmed DU continued CISC and those with benign prostatic obstruction (BPO) were offered transurethral resection of the prostate (TURP).

**Results:** Mean age was 79 years (30-91). At three month review, 42 (88%) patients were appropriate for urodynamics. Twenty six patients (62%) were found to have BPO of which 22 had a TURP. Following surgery, 21 (95%) were voiding well. Sixteen patients (38%) were found to have DU and subsequently continued treatment with CISC and reviewed in clinic for change in bladder function.

**Conclusion:** CISC is the gold standard treatment for DU. A key cause of poor long-term outcome of TURP results is underlying DU. The use of initial CISC allowing bladder rest followed by urodynamics on selected patients helps identify...