Surgical marsupialization Vs External drainage of Symptomatic lymphocele following renal transplant: Lesson learned

Nayab Danish, Sanjoy Sureka, Aneesh Shrivastava, Uday P Singh, MS Ansari
SGPGI, Lucknow

Introduction: Lymphocele following renal transplantation is a recognized complication. Herein we describe our experience of managing lymphoceles.

Material: Retrospective evaluation of symptomatic lymphocele following live related renal transplantation at a tertiary care centre from 1990 to 2019. Till 2000 (Group I) most of lymphocele were initially managed with external drainage and sclerotherapy (EDST). If recurred, they were managed by surgical internal drainage (SID). From 2001 onward (Group II) we managed it mostly by SID, because of high recurrence rate of EDST. External drainage was performed in small (< 100 ml) or infected lymphocele.

Result: 39 symptomatic lymphocele were diagnosed in 3010 recipients (Group I =15/735, 2 %; group II = 24/2275, 0.95 %). In group I, 11 received EDST and 8 recurred (72 %). Finally 12 of group I underwent SID (open internal marsupialization =5, laparoscopic deroofing=7). Mean volume successfully managed by EDST was 70 as compared to 215 ml in SID. In group II, six underwent (Mean Volume 45 ml) EDST and 2 recurred, 20 patients required SID (open internal marsupialization =5, laparoscopic deroofing=15). Omentopexy was performed in all. Intraoperative USG was used to confirm location. Mean operative time in deroofing was 90 and 85 minutes in open and laparoscopy. Open drainage was preferred in inferomedial locations which were difficult to access by laparoscopy. Length of hospital stay was 7.5 vs 4.5 days in Open Vs Lap ( p=<0.01). There was no intra-operative complication and no recurrence in SID.

Conclusion: Symptomatic lymphocele should be managed by surgical drainage preferably by laparoscopic deroofing. Intraoperative ultrasonography is useful to confirm location. EDST is associated with high recurrence and should only be tried in infected and very small lymphocele.

Polyuria and polydipsia in posterior urethral valve: significant risk factors for progression to end stage renal disease

Naveen Kumar, Shrey Jain, Sarita Syal, Priyank Yadav, ,
SGPGI, Lucknow

Introduction: Upto 50% children with PUV progress to ESRD. The objective of our study was to identify the variables which affect the long-term renal outcome in children with posterior urethral valves (PUV).

Material: Retrospective analysis of 370 children with PUV was done who underwent ablation of valves between January 1992 and June 2017 at our tertiary care center. Risk factors analyzed were nadir serum creatinine greater than 1.0 mg/dl, bilateral grade 3 or higher VUR at diagnosis, recurrent febrile UTIs, severe bladder dysfunction, polyuria (urine output greater than 3 ml/kg/minute) and polydipsia (oral fluid intake greater than 50 ml/kg/day and 100 ml/kg/day under and above 5 yrs respectively). On the basis of development of ESRD, patients were divided into two groups: those who developed (Group 1) and those who did not develop ESRD (Group 2).
Result: 60% and 25.2% patients were polyuric in group 1 and group 2 respectively (p value<0.0001). Almost the same numbers were polydipsic in both the groups (p value<0.0001). Thirty eight (12.3%) patients progressed to ESRD. Mean age at progression to ESRD was 11.5 years (range 5-21). On univariate analysis, the risk predicting variables were; nadir serum creatinine value greater than 1 mg/dl (p value < 0.0001), B/L high grade VUR (p value = 0.002), severe bladder dysfunction (p value < 0.0001), polyuria and polydipsia (p value<0.0001). On multivariate logistic regression analysis, nadir serum creatinine greater than 1mg/dl (OR 23.79; CI 8.20-69.05), severe bladder dysfunction (OR 5.67; CI 1.90-16.93), polyuria and polydipsia (OR 4.45; CI 1.80-15.05), were found to be independent risk factors predictive of ultimate progression to ESRD.

Conclusion: Polyuria and polydipsia along with the nadir serum creatinine and bladder dysfunction are the main risk factors affecting the long-term renal outcome in cases of PUV.

Long term outcomes of Cohen’s Cross Trigonal Reimplantation for primary VUR in poorly functioning kidney

Ravi Banthia, Yashpal Thakur, Sarita Sayal, Priyank Yadav, Aneesh Srivastav, MS Ansari
SGPGI, Lucknow

Introduction: Open ureteric reimplantation by cross trigonal technique described by Cohen is amongst the commonest options for surgical correction of vesicoureteric reflux (VUR). There is lack of evidence in literature though for what actually happens to such kidneys in the long run, particularly those which are poorly functioning. The aim of this study was to assess the long-term outcomes of ureteric reimplantation in poorly functioning kidneys in children with unilateral primary VUR.

Material: Children with unilateral primary VUR and a relative renal function less than 30% who underwent open or laparoscopic ureteric reimplantation between January 2003 and December 2013 were included in the study. Patients who had a follow up of less than one year were excluded. Preoperative evaluation consisted of a voiding cystourethrogram (VCUG) and dimercaptosuccinic acid (DMSA) scan. In the follow up period, patients underwent diuretic scan at 6 weeks and at 6 months. Follow up ultrasound was done for change in grade of hydronephrosis and retrovesical diameter. Subsequent follow up was done at 6 month intervals with evaluation for proteinuria and hypertension and any recurrent UTI. For assessment of cortical function DMSA was repeated annually for 5 years after surgery. Paired samples t test was used to test the mean difference of DMSA between pre-post observations.

Result: During this period, 32 children underwent ureteric reimplantation for unilateral primary VUR. After excluding those with insufficient follow up, 28 were included in the analysis. Most of the patients were males (n=24/28, 85%). Patient’s age (mean±SD, range) was 5.21±3.71, 1-18 years. The grades of VUR were II (1 patient), III (6 patients), IV (9 patients) and V (12 patients). The pre and postoperative DMSA was 21.07±8.03 and 21.57±8.77, which was almost same (statistically equal, paired samples t test: p=0.632). The median (range) follow up duration was 27 (12-60 ) months. One patient had persistent reflux after surgery (preoperative: grade IV, postoperative: grade III). The difference in the preoperative and postoperative DRF was less than 5% in 26 patients. In one patient, the DRF decreased by 10% (22% to 12%) while in another patient, the DRF increased by 7% (34% to 41%) after surgery. No patient had increase in scarring after surgery. 15% patients were hypertensive before surgery and all of them continued to be hypertensive after surgery while no
patient developed hypertension after surgery. No patient had significant proteinuria (>150 mg/day) during follow up period.

**Conclusion:** Children with unilateral primary VUR and poorly functioning kidney maintain the renal function over long term in most cases. Hypertension and proteinuria does not progress over time in these patients.

Laparoscopic simultaneous bilateral adrenalectomy - indications and outcomes from a retrospective cohort

**Pradeep Prakash**, Rashmi Ramachandran, Nikhil Tandon, Rajeev Kumar

**All India Institute of Medical Sciences, New Delhi**

**Introduction:** We report our experience of indications, feasibility and outcomes of laparoscopic simultaneous bilateral adrenalectomy (LSBA) at a tertiary care center and compare with open simultaneous bilateral adrenalectomy (OSBA).

**Material:** Data of patients undergoing simultaneous bilateral adrenalectomy (SBA) between July 2008 and March 2019 was retrieved from our prospectively maintained electronic database and hospital records. Tumor characteristics, operative and recovery parameters, and complications were evaluated for indications and outcomes of LSBA vs OSBA.

**Result:** During the study period, 37 patients (mean age 31.1±12.3 years) underwent SBA, out of which 31 underwent LSBA and 6 underwent OSBA. The various indications for SBA were bilateral pheochromocytomas (25, LSBA-20, OSBA-5), Cushing syndrome (11, all LSBA) and ACC (1, OSBA). Mean tumor size in LSBA and OSBA group was 3.8±1.5 and 8.7±6.7 cm respectively (p=0.002). Mean operative time for LSBA group was 185.4±41.2 minutes including repositioning and reprepping time, as compared to 197.5±33.4 minutes for OSBA group (p=0.51). Mean blood loss was 163.5±191.3 ml in LSBA group and 666±222.8 ml in OSBA group (p=0.004). Only one patient required blood transfusion in LSBA group while four patients in OSBA group required transfusion. Mean hospital stay in LSBA and OSBA groups were 3.64±2.36 and 7.66±3.2 days respectively (p=0.005). Two patients in LSBA group and one in OSBA group suffered post-operative complication in the form of intra-abdominal collection requiring pigtail drainage.

**Conclusion:** LSBA is feasible and safe in patients requiring bilateral adrenalectomy, e.g bilateral pheochromocytomas and refractory Cushing syndrome, and associated with lesser operative time and blood loss, low morbidity and earlier recovery compared to OSBA. The better convalescence and cosmetic outcomes associated with LSBA may especially encourage endocrinologists to consider bilateral adrenalectomy earlier in the management of Cushing syndrome after failed attempt to control primary source.

Smiley cutaneous ureterostomy: A satisfactory option for urinary diversion in selected cases of radical cystectomy

**Abhay Kumar**, Sanjoy Sureka, Rahul Jena, Rakesh Kapoor, Anil Mani

**SGPGIMS Lucknow**

**Introduction:** Cutaneous ureterostomy is an option for urinary diversion in selected patients. But stomal stenosis remains a limiting factor. To reduce stomal related complications we have made two
unique modifications of the conventional technique. We aim to present the technique and outcome of our ‘Smiley’ cutaneous ureterostomy and compare them with pre-existing technique

**Material:** Between September 2016 to Jan 2019, 13 patients had modified ‘Smiley’ cutaneous ureterostomy following radical cystectomy. End to side transureteroureterostomy was done and right ureter was taken out as cutaneous ureterostomy (n=10). The first modification was the lateral location of the stoma, close to anterior axillary line instead of the more conventional medial location to keep the course of the ureter straight and short. The second modification was the wide based skin flap to cover half or more of the circumference of the stoma opening and putting the tip of the flap approximately four cm proximal to the ureteric margin at the angle of the spatulated side (smiley appearance) to prevent stomal stenosis. DJ stents were placed for 2-4 weeks. All patients were followed up monthly for 3 months and then 3 monthly with creatinine and renal sonography. Stoma related complications were compared with our preexisting published technique

**Result:** Of the 13 patients, 7 had radical cystectomy (T3 and T4 with or without lymph nodal metastases) and one had radical cystectomy with left nephroureterectomy. Five patients had palliative cystectomy with mean age of 69.5+5.5 yr. One patient developed narrowing of the common ureteric channel proximal to the stoma following adjuvant radiotherapy. One patient had pyelonephritis with stent in situ 3 weeks following surgery. One patient expired in follow up with metastatic disease. Rest of the patients had well-functioning stoma without need for calibration or self-dilatation with median follow up of 10.5 months (5-19 months). None of the patients had any problem related to ureterostomy bag application. This cohort had more than 90% complication-free stoma as compared to our older published series with atleast 25% reported major stoma related complications (p=0.04)

**Conclusion:** Smiley cutaneous ureterostomy provides an excellent option for urinary diversion following radical cystectomy especially in cases of advanced disease, poor risk patients or in palliative setting

**Novel modification during lap simple nephrectomy for giant hydronephrotic kidneys results in better outcomes: IGEC technique.**

**Yashpal Thakur, Sanjoy Sureka**

**SGPGIMS Lucknow**

**Introduction:** To describe the technique, findings, intra operative and post operative results of IGEC transperitoneal laparoscopic simple nephrectomy and its feasibility in performing nephrectomy for non functioning giant hydronephrotic kidneys.

**Material:** A total of 21 patients (14 men and 7 women, mean age 31.4 years, range 16-52 years) underwent IGEC laparoscopic simple nephrectomy for giant hydronephrotic kidneys, over a period of 3 years at a tertiary care centre. The mean diameter of the hydronephrotic kidney was 18.12 cm. The most common etiology was non functioning kidney secondary to PUJO (17 patients) with 4 patients having NFK secondary to PUJ calculus. Three conventional ports with an additional 10mm flank port for extracorporeal retraction of the renal unit. Partial renal decompression to assist lower & upper pole dissection in intragerotal plane and complete decompression with extracorporeal extraction of redundant sac to aid hilar access are the key steps.

**Result:** All cases were completed without need for conversion to open procedure. Mean operative time was 97.68 + 11.271 minutes and mean blood loss was 107.18 + 8.418 ml. All patients except
four were allowed clear liquids on day of surgery. Both the median period of post op analgesia and median length of hospital stay was 3 days.

**Conclusion:** IGEC transperitoneal laparoscopic nephrectomy is a safe and effective technique for removal of giant hydronephrotic kidneys without wasting time for tackling large sac as well as lost in multiple dissecting planes as we encounter during conventional nephrectomy of giant hydronephrotic kidney. More case series are required to establish standardized steps and the superiority of this technique.

**The complications of arterio-venous fistula requiring surgical intervention in hemodialysis dependent patients - A clinical overview and surgical management**

Sanjay Sureka, Vivek Kumar Singh, Aneesh Srivastava, Rakesh Kapoor, Uday pratap Singh, Priyank Yadav, Yashpal Singh

SGPGIMS Lucknow

**Introduction:** Complications of arterio-venous fistula (AVF) in Hemo-Dialysis (HD) dependent patients are potentially dangerous and may require aggressive surgical management. We aimed to study the clinical presentation, evaluation and surgical management of the complications associated with AVF.

**Material:** A retrospective study was conducted (n=444) in patients with AVF related complications during period of 2001 to 2019 who required surgical intervention. Detailed history related to type of AVF, date of initiation of HD, clinical examination findings were recorded. Doppler study and/or CT/ MR angiogram was done as indicated. These complications were managed as per individual case merit.

**Result:** A total of 444 complications were encountered. One ninety eight out of 444 patients had primary fistula made at other center. Most common complication was pseudoaneurysm (PA) (n=172, 38.7%) followed by complicated (thrombosis with or without infection, overlying skin changes etc.,) true aneurysmal dilatation of outflow vein (n=140, 31.5%), venous hypertension (n=93, 20.9%), steal phenomenon (n=15, 3.4%), pulmonary hypertension (n=12, 2.7%) and cardiac failure (n=8, 1.8%). Fistula could be salvaged only in 12.8%. Radial artery was ligated in radial AVF for any of the above complications. Brachiocephalic (BCF) or Brachiobasilic fistula (BBF) complications required repair of artery when PA involved anastomotic site. Venous hypertension involving BCF were managed with ligation of outflow vein or angiographic balloon dilatation of proximal venous stenotic segment specially with cases of focal short segment narrowing. Success rate of angiographic management were 65% in our cases with 72% of them had recurrence of symptoms with median follow up of 20 months.

**Conclusion:** Pseudoaneurysm is the commonest complication of AVF requiring surgical intervention. Doppler and/or MR/CT angiography was more useful for detail vascular anatomy apart from diagnosis in selected cases. Angioplasty as a salvage procedure may be helpful in selected cases as short term measure.

**Is active surveillance a valid treatment option in low risk prostate cancer in India?**

Puneet Ahluwalia, Shanky Singh, Saurabh Patil, Puneet Ahluwalia, Gagan Gautam

Max Hospital Saket-Fellow Robotic Urooncology Surgery

**Introduction:** Prostate cancer represents a substantial public health burden and it is generally considered more aggressive and deadlier for developing country men like India. So is it safe to
consider active surveillance for these ‘higher’ risk patients? And if not, should upfront radical prostatectomy be preferred in low risk carcinoma prostate in such men? In the following study, we present the available “albeit limited” evidence aimed to address these important questions.

**Material:** Data of pre and post robot assisted radical prostatectomy specimens was analysed in 46 cases of low risk prostate cancer patients according to NCCN guidelines with a pre-op Gleason score of 3+3. Gleason scoring was done on both specimens. Two cases were excluded as malignancy wasn’t found post-operatively. T stage and Gleason scores were compared pre and post-op. The Gleason scores were correlated with the age, PSA and number of needle biopsy cores.

**Result:** Of 46 cases, data was analysed for 44 cases (among 2 cases malignancy wasn’t found post-operatively). Clinically, out of 44 cases 6 patients had T2a stage and 38 patients had T1c stage. The mean age and PSA were 61.07 (SD 6.84) years and 6.89 (SD 2.06) ng/ml, respectively. The average Gleason score significantly increased by 0.59 (p<0.001) post-operatively. The primary grade increased in 4 (9.09%) cases, secondary grade increased in 22 (50%) cases. Overall, 25 (56.82%) cases had an increase in Gleason score. Upstaging occurred in 40 cases of which 70.45%(31) cases upstaged to T2. Upstaging occurred to T3 in 20.45% (9) cases of which 5 cases upstaged to T3a and 4 cases upstaged to T3b. Change in Gleason score was significantly associate with PSA and number of needle biopsy cores.

**Conclusion:** There is a significant upgrading of Gleason score and upstaging of prostate cancer on radical prostatectomy specimens in low risk patients from India who would otherwise meet criteria for active surveillance. So upfront radical prostatectomy could be a valid treatment option compared to active surveillance in such patients.

**Role of GaPSMA PET in diagnosis of cancer prostate in men with grey zone PSA between 4 and 20 ng/ml. Is it better than mpMRI?**

**Kumar Saurav**, Vishnu Prasad, Vijay Tyagi, YM Prashanth, Siddharth Yadav, Pawan Vasudeva

**VMMC & SJH, New Delhi**

**Introduction:** We compared the diagnostic accuracy of percentage free prostate specific antigen (PSA), multiparametric magnetic resonance imaging (mpMRI), and gallium 68 prostate specific membrane antigen positron emission tomography (Ga PSMA PET) to detect cancer prostate in men with PSA in grey zone, between 4 and 20 ng/ml in pre-biopsy settings.

**Material:** This prospective study evaluated men with PSA values between 4 and 20 ng/ml. All patients underwent percentage free PSA estimation, mpMRI, and Ga PSMA PET scan. It was followed by cognitive fusion/registration biopsy along with systematic 12 core biopsy to detect cancer prostate. The diagnostic accuracy of percentage free PSA, mpMRI, and Ga PSMA PET scan was compared with results of cognitive fusion/registration biopsy.

**Result:** A total of 15 patients were included, of which 11 had an identifiable lesion on imaging and 9 had malignancy on the final histopathology report. The sensitivity, specificity, positive predictive value, negative predictive value (NPV), and diagnostic accuracy of mpMRI were 62.5%, 71.4%, 71.4%, 62.5%, and 66.6%, respectively, and that of Ga PSMA PET scan were 88.8%, 66.6%, 80%, 80%, and 80%, respectively. The sensitivity of detection of clinically significant cancers for Ga PSMA was higher (100%) compared to MRI (33.3%). However, Ga PSMA also detected a greater number of insignificant lesions as compared to MRI.
Conclusion: Ga PSMA PET scan has higher sensitivity, NPV and accuracy in predicting presence of prostate cancer and can also be used to direct specific biopsy cores during systematic biopsy.

Cystitis cystica: knowing the nature of unknown voiding dysfunction
Harshit Garg, Prabhjot Singh, Brusabhanu Nayak, Seema Kaushal, Amlesh Seth
All India Institute of Medical Sciences, New Delhi

Introduction: To study the presentation and natural course of cystitis cystica- a controversial premalignant lesion of bladder.

Material: A retrospective analysis of patients with histopathologically proven cystitis cystica for bladder lesion between 2016 till 2018 was done. Perioperative details along with the last available follow-up were included in the analysis.

Result: Total 10 patients were included. The mean age (± SD) was 33.4 (± 11.9) years and 9 (90%) were males. The most common presentation were irritative and obstructive lower urinary tract symptoms (90%) along with haematuria (30%), suprapubic pain (40.0%) and acute urinary retention (10%). All the patients underwent transurethral resection of the bladder tumor as diagnosed on preoperative imaging. All the patients had trigonal lesion with bullous appearance partially obstructing the bladder neck. 5 patients (50%) had backpressure changes in the kidneys and underwent either bilateral JJ-stenting or percutaneous nephrostomy. The mean follow up duration was 15.4 months. Patients were kept on surveillance cystoscopy along with upper tract evaluation. The mean number of recurrences was 1.7 (± 0.8) with mean number of recurrent resections was 1.4 (± 0.4). One of the patients had to undergo bilateral ureteric reimplantation with resection of lesion along with augmentation cystoplasty while another patient underwent cystectomy with urinary diversion owing to recurrence and refractory lower urinary tract symptoms. In addition, there was no evidence of malignancy subsequent to this entity in any of the patients.

Conclusion: Cystitis cystica is a rare entity and usually occurs in younger population. Exact etiology and natural course of disease is still unknown.