Video Session

VID-01
Bladder training for kids

Rickard, Mandy[1]; Brownrigg, Natasha[1]; D'Cruz, Jennifer[1]; DeMaria, Jorge E.[1]; Braga, Luis H.[1]
[1]Department of Surgery, McMaster University, Hamilton, ON, Canada

Introduction and Objectives: Currently, urotherapy is the primary treatment for children with bladder/ bowel dysfunction (BBD) and is administered during a standard outpatient clinic visit. In busy pediatric urology clinic settings, it is often difficult to provide comprehensive urotherapy in a standard 15-minute visit and simultaneously engage with patients. Therefore, our objective was to create an animated educational video designed to teach children healthy bladder and bowel habits to better connect with them.

Methods: Three key concepts of bladder training, timed and double voiding, adequate water intake, and constipation management, were incorporated in our screenplay. We conceptualized and designed the animated characters, dialogues, and script. This bladder training video was then piloted to a group of pediatric clinicians, research staff, and children with BBD, whose feedback enhanced the content and visuals in the video.

Results: A 7-minute cartoon with characters "Becky the Bladder" and "Will the Water Bottle" guide children through concepts of bladder training. This includes an overview of the urinary tract anatomy; illustration of how urine is formed; explanation of why children experience incontinence and how UTI develop; discussion of concepts such as constipation, frequency, urgency; and finally an overview of the 3 main bladder training steps.

Conclusion: Our educational video acts as a highly efficient mode of delivering urotherapy, allowing patients to consistently receive the same, high quality information; regardless if seen by a physician or nurse practitioner. In addition, this video can be played at patients' home as often as necessary to reinforce the bladder training concepts. Currently, the effectiveness of this video is being studied in a randomized controlled trial at our institution.

VID-02
Laparoscopic approach of left renal cell carcinoma with a renal vein thrombus

Luz, Murilo A.[1,2]; Mattana, Jeferson[2]; Ribeiro, Reitan[2]
[1]Urologic Oncology, Hospital Erasto Gaertner, Curitiba, Brazil; [2]Surgical Oncology, Hospital Erasto Gaertner, Curitiba, Brazil

Introduction and Objectives: Minimally invasive techniques are currently used as standard procedures for performing radical nephrectomies. However, in the presence of renal vein thrombus, a classic open procedure is warranted in the majority of cases. The management of left renal vein thrombus using a standard laparoscopic approach is a challenging procedure.

Methods: We present this surgical video showing a technique for left laparoscopic nephrectomy using the same access to manage an associate extensive renal vein thrombus. Our patient is a 59 year-old asymptomatic man who was first diagnosed with high-risk prostate cancer and during staging work-up was found to have a 3-cm left renal mass. Angio-MRI demonstrated an extensive renal vein thrombus occupying almost the whole vessel extension and going very close to the inferior vena cava. We elected to perform a laparoscopic approach. The patient was placed in a standard left lateral position routinely used for left radical nephrectomy. Trocar placement also followed standard positioning with camera port lateral to the umbilicus, two additional ports in a right angle and a 5-mm assistant port close to the superior anterior iliac spine. A left lumbar vein was transected to allow proper exposure of the entire renal vein. We were able to determine that the thrombus did not extend into the vena cava. A gentle milking of the thrombus was performed and a laparoscopic stapler was then used to transect the renal vein.

Results: Patient developed no postoperative complications and final pathology showed a T3b renal cell carcinoma (clear cell). Total operative time was 3 hours and patient was discharged home on post-operative day 3.

Conclusions: In selected patients, a laparoscopic approach may be used to access a left renal vein thrombus while performing a radical nephrectomy. We found reasonable to use the same patient positioning as during standard nephrectomies.

VID-03
Renal artery rupture by atheromatous plaque during hem-o-lok clipping

Luz, Murilo A.[1,2]; Mattana, Jeferson[2]; Ribeiro, Reitan[2]
[1]Urologic Oncology, Hospital Erasto Gaertner, Curitiba, Brazil; [2]Surgical Oncology, Hospital Erasto Gaertner, Curitiba, Brazil

Introduction and Objectives: Laparoscopic radical nephrectomies (LRN) are procedures commonly performed worldwide. Several situations may increase the difficulty in executing this surgery, namely obesity, body habitus, tumor size and surgical expertise. We present a case of a renal artery bleeding during hilar management while performing a LRN.

Methods: We present this surgical video showing a left renal artery bleeding at the moment of hemo-o-lok clipping. Arterial fracture happened due to the presence of significant atherosclerosis. We present all steps of the surgical approach from arterial dissection to bleeding control. Other than showing the vessel rupture we detailed the imaging findings related to the atherosclerotic plate and also the intraoperative decision making for conversion to open procedure. Each decision step with respective timing (chronometer) is presented so we can have a real-time understanding of what happened and how the surgical team handle this challenging situation.

Results: Patient is a 79 year-old man who was scheduled for left LRN due to a 10-cm renal mass. After an uneventful left colon and kidney dissection, a massive renal artery bleeding happened at the exact moment that the first hemo-o-lok clip was applied. Careful review of 3D reconstructed images showed that this artery had extensive atheromatosis, which caused the vessel fracture. Conversion to open procedure was immediately warrant and the bleeding properly controlled. Patient developed a transitory hypotension, lost 600 cc of blood but no blood transfusion was necessary. No other surgical complications happened and postoperative curse was uneventful. Total operative time was 3 hours and patient was discharged home on post-operative day 4.

Conclusions: Careful evaluation of possible atheromatous plaques in the renal vasculature can possibly predict the chance of renal artery fracture. Even experienced surgeons should not delay conversion trying to repair this complex lesion with laparoscopic instruments.

VID-04
Gubernacular sparing laparoscopic orchidopexy for intra-abdominal testicle

Alyami, Fahad[1]; Bowlin, Paul[1]; Lee, Linda[1]; Farhat, Walid A.[1]
[1]Department of Surgery, Division of Urology, Hospital for Sick Children, University of Toronto, Toronto, ON, Canada

Introduction and Objectives: Laparoscopic management of the intra-

abdominal testis typically involves division of the gubernaculum and passage of the testicle into the scrotum through a new inguinal hiatus. However, this approach can compromise gubernacular blood supply and may predispose the patient to testicular atrophy.
Methods: Video demonstrating techniques for performing two-stage laparoscopic orchidopexy with gubernacular preservation.
Results: N/A
Conclusions: The laparoscopic two stage orchidopexy with gubernacular preservation is a safe, feasible, and effective technique.

VID-05

Transabdominal sacrocolpopexy with rectus fascia graft

Quirouet, Adrienne[1]; Abraham, Nitya[2]; Goldman, Howard[1]
[1]Urology, Cleveland Clinic, Cleveland, OH, United States; [2]Urology, Montefiore, Bronx, NY, United States

Introduction and Objectives: Extrusion is a known risk of abdominal sacral colpopexy performed with synthetic mesh. Long-term follow-up in the CARE trial revealed 23 cases or an estimated 9.9% risk of mesh extrusion. Infection is also a risk when using synthetic mesh. There are 26 reports of spondylodiscitis after sacral colpopexy with synthetic mesh. The risk of infection is likely increased when concomitant gastrointestinal or genitourinary surgery is performed. There are few reports on use of autologous rectus fascia graft for abdominal sacral colpopexy. The objective of the video is to demonstrate a transabdominal sacrocolpopexy using rectus fascia graft.
Methods: A midline laparotomy incision had already been made by the colorectal service. The fat overlying the rectus fascia was dissected off. The desired segment of rectus fascia was marked and divided. The graft measured approximately 2 cm wide by 12 cm long. The peritoneum overlying the sacral promontory was divided thus exposing the anterior longitudinal ligament. An EEA sizer was placed in the vagina. The bladder was distended with irrigation thus defining its borders. The bladder was gently grasped with a Babcock clamp and retracted anteriorly exposing the area of the vaginal cuff. The bladder was carefully dissected off the vaginal cuff using sharp dissection. Appropriate length of the graft was estimated. Vaginal exam confirmed adequate reduction of the prolapse. The rectus fascia graft is secured to the vaginal cuff caudally and to the anterior longitudinal ligament cranially. The peritoneum over the sacral promontory was closed with interrupted sutures.
Results: This patient was last seen at 4 months for follow-up. She reports resolution of the vaginal pressure, improvement in voiding, and rare stress urinary incontinence. Renal ultrasound demonstrated no hydroureteronephrosis on the side of her re-implantation. On exam, her POPQ measurements were significant for Ba point of -2, a C point of -9 and a Bp point of -2.
Conclusions: Abdominal sacral colpopexy using autologous rectus fascia graft is a feasible option, especially in cases where infection and synthetic mesh extrusion risks are high.

VID-06

Laparoscopic omentoplasty to support anastomotic urethroplasty in complex and redo pelvic fracture urethral defect patients

Shahrour, Walid[1]; Hunter, Craig B.[1]; Suranah, Sandesh[1]; Batra, Vikram[1]; Joshi, Pankaj M.[1]; Kulkarni, Jyotsna[1]; Sansalone, Salvatore[3]; Lazzeri, Massimo[4]; Barbagli, Guido[2]; Kulkarni, Sanjay[1]
[1]Urology, Kulkarni Center for Reconstructive Urology, Pune, India; [2]Urology, Center for Reconstructive Urethral Surgery, Arezzo, Italy; [3]Department of Experimental Medicine and Surgery, University of Tor Vergata, Rome, Italy; [4]Division of Oncology, Unit of Urology, University Vita-Salute San Raffaele, San Raffaele, Italy

Introduction and Objective: The aim of this study was to test the hypothesis that a new surgical technique using elaborated perineal anastomotic urethroplasty combined with laparoscopic omentoplasty for patients with complex and prior failed pelvic fracture urethral defect repair was feasible, safe and effective.
Methods: We performed a prospective, observational, stage 2a study to observe treatment outcomes of combined perineal and laparoscopic approach for urethroplasty in patients with pelvic fracture urethral defect at a single center in Pune, India between January 2012 and February 2013. Complex and redo patients with pelvic fracture urethral defect occurring after pelvic fracture urethral injury were included in the study. Anterior urethral strictures were excluded. The primary study outcome was the success rate of the surgical technique and the secondary outcome was to evaluate feasibility and safety of the procedure. The clinical outcome was considered a failure when any postoperative instrumentation was needed.
Results: Fifteen male patients with a median age of 19 years were included in the study. Seven patients were Adolescents (12-18 years) and 8 (53.3%) adults (19-49 years). All patients underwent elaborated bulbo-membranous anastomosis using a perineal approach with inferior pubectomy combined with laparoscopic mobilization of the omentum into the perineum to envelope the anastomosis and to fill the perineal dead space. Of 15 patients 14 (93.3%) were successful and 1 (6.6%) failed. One adolescent boy 14 years old developed a recurrent stricture 2 months after the procedure and was managed using internal urethrotomy. Median follow up was 18 months (range 13 to 24).
Conclusion: Combining a laproscopic omentoplasty to a membranobulbar anastomosis for complex and redo pelvic fracture urethral injury is successful, feasible, safe, and with minimal additional morbidity to the patient. The technique has the advantage of a perineal incision and the ability to use the omentum to support the anastomosis.

VID-07

Robotic pyelolithotomy in ectopic pelvic kidney: Side docking in supine position and a four-arm approach

Almarzouq, Ahmad N.[1]; Al-Yousef, Rawan J.[3]; Aldousari, Saad[1,3]
[1]Division of Urology, Department of Surgery, Mubarak Al-Kabeer Hospital, Kuwait City, Kuwait; [2]Faculty of Medicine, Kuwait University, Kuwait City, Kuwait; [3]Division of Urology, Department of Surgery, Kuwait University, Kuwait City, Kuwait

Introduction and Objectives: Ectopic kidney is a congenital malformation occurring in 1 in 900 births. Only about one in 10 of these are diagnosed. Patients with ectopic kidneys can be completely asymptomatic and discovered incidentally or they present with symptoms owing to urinary tract infection, obstructive uropathy or nephrolithiasis. Ectopic kidneys with renal pelvic stones can be challenging to treat. We report our experience in managing a case of ectopic pelvic kidney with a renal pelvic stone by robotic pyelolithotomy.
Our objective is to present our approach to Robotic Pyelolithotomy in the management of renal pelvic stone in ectopic pelvic kidney.
Methods: Our case is a 46 year old male with 2 months history of vague lower abdominal pain. No other urological symptoms. During his workup a Computed Tomography (CT) scan showed left ectopic pelvic kidney with an 8 x 12 x 11 mm stone in an anomalous renal pelvis showing multiple compartments connected by narrow channels. Two attempts at flexible ureteroscopy (URS) failed to reach the stone.
After placing a 4.7 French double J stent we proceeded with left pelvic robotic pyelolithotomy. Side docking was utilized with the patient in supine trendelenburg position. Port placements were similar to robotic assisted laparoscopic prostatectomy.
Results: Docking time was 35 minutes and total Console time was 150 minutes. There were extensive adhesions in the region of the left pelvic kidney. Multiple attempts failed to follow the course of the ureter in order to locate the renal pelvis. We subsequently opened the renal pelvis directly and used the flexible cystoscope to basket the stone out the renal pelvis through a narrow infundibulum. Estimated Blood Loss (EBL) was < 100 mls. A suction drain was inserted. The patient was discharged in < 48 hours postoperatively after removal of the drain.
Conclusion: Stones in ectopic pelvic kidneys pose a great challenge due to altered surgical anatomy. Robotic pyelolithotomy is a safe and feasible approach providing exceptional exposure and easier dissection. It is imperative to have a detailed understanding of ectopic kidney anatomy to ensure safety and procedure success. Utilization of flexible cystoscopy aided in the localization and extraction of the stone in an anomalous renal pelvis.

VID-08

Laparoscopic omentoplasty in patients with concurrent pelvic fracture urethral injury and recto-urethral fistula

Shahrour, Walid[1]; Joshi, Pankaj[1]; Hunter, Craig B.[1]; Batra, Vikram[1]; Suranah, Sandesh[1]; Kulkarni, Jyotsna[1]; Kulkarni, Sanjay[1]
[1]Urology, Kulkarni Center for Reconstructive Urology, Pune, India

Introduction and Objectives: Rectourethral fistula is a morbid complication that can occur post trauma, radical prostatectomy, radiation, or after pelvic surgery. The management of these cases can be challenging and might require multiple procedures to achieve a cure. The use of omentum flap between the rectum and the urethra is recommended for its potential benefits in prevention of fistula recurrence. We aim to illustrate the feasibility and safety of a new laparoscopic surgical technique for interposition of omentum in patients with complex pelvic fractures urethral injury (PFUI) and rectourethral fistula (RUF) undergoing perineal urethroplasty.

Methods: We performed a prospective case series of 3 patients who presented to our center with PFUI and RUF from September 2014 till October 2014. These patients underwent laparoscopic omentoplasty combined with progressive perineal approach for urethroplasty. The primary study outcome was the success rate of the surgical technique and the secondary outcome was to evaluate feasibility and safety of the procedure. The clinical outcome was considered a failure when any postoperative instrumentation was needed or the recurrence of RUF.

Results: Median age is 30 years old (28-33). All 3 patients had complex PFUI with RUF. They all had an attempt of perineal anastomotic urethroplasty with RUF repair that failed outside our center and were referred to us subsequently. All the patients had supra pubic catheters and 2 of the three patients were passing urine through the rectum and the urethral meatus. One of the patients had a loop colostomy that was closed during the first failed surgery. No intra-operative or post operative complications occurred. Patients were discharged home on post-operative day 3. All 3 patients had the urethral catheter removed after 6 weeks. 3 months follow up shows no fistula recurrence with good urine flow.

Conclusion: Using our new technique of laparoscopic omentoplasty for interposition of omentum in patients with RUF post PFUI is a viable and safe option. This allows us to perform a perineal surgery with the benefit of omental interposition using a minimally invasive technique. Further studies with larger number of patients as well as longer follow up would be needed.