THE USE OF ENSEAL® IN NERVE SPARING ROBOTIC PROSTATECTOMY

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(Presentation to be made by Dr. Choe)

**Purpose:** A video presentation of the EnSeal® surgical device in nerve sparing robotic prostatectomy.

**Materials and Methods:** The key and crucial steps are outlined and demonstrated on this high definition (HD) video of the use of the EnSeal® surgical device in nerve sparing robotic prostatectomy.

**Results:** A total of 110 bilateral nerve sparing robotic prostatectomies were completed using the EnSeal® surgical device. At 6 months, 50% of the patients achieved potency (adequate for penetration) with or without the use of PDE5 inhibitors. At 12 months, 68% of the patients achieved potency (adequate for penetration) with or without the use of PDE5 inhibitors.

**Conclusion:** The use of the EnSeal® surgical device simplifies hemostasis and obviates the need for surgical clips. Furthermore, it has potential for excellent functional results by minimizing the tissue char and thermal injury to the surrounding tissue during nerve sparing robotic prostatectomy.
THE TECHNIQUE OF EXTENDED PELVIC LYMPH NODE DISSECTION DURING ROBOTIC PROSTATECTOMY

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(Presentation to be made by Dr. Porter)

Objectives: Robotic-assisted laparoscopic prostatectomy (RALP) has become widespread as a treatment option for patients with localized prostate cancer. Pelvic lymph node dissection (PLND) at the time of open radical retropubic prostatectomy provides staging information and a potential therapeutic advantage. The value and extent of PLND remains controversial with little data evaluating outcomes of PLND during RALP. We present our technique of extended PLND performed during RALP by a single surgeon.

Methods: Patients underwent extended PLND if they had Gleason score of 7 or greater, PSA greater than 10 or if their risk of lymph node involvement was 3% or greater based on the MSKCC pre-operative nomogram. Extended PLND was performed with the daVinci robot using the same 5-port configuration as for prostatectomy. Extended PLND was performed after bladder mobilization. Boundaries of PLND included Cooper’s ligament caudally, bifurcation of the common iliac artery cranially, external iliac vein laterally, bladder wall medially and internal iliac vessels posteriorly. Dissection was performed posterior to the obturator nerve and vessels to include the Zone 3 lymph nodes. Lymphatic tissue was removed en bloc to facilitate removal and clips were used liberally to limit lymphatic leakage.

Results: 166 patients underwent extended PLND. Positive nodes were found in 22(13.3%) patients and the average nodal count was 12.4. Extended PLND had a longer length of surgery compared to robotic prostatectomy without PLND (203 ± 41 min. vs. 181 ± 40 min.; p<0.01). Complications included pelvic lymphoceles in three patients, and obturator neuropathy in two others.

Conclusions: Extended pelvic lymph node dissection during RALP is feasible with minimal complications. The lymph node yield and rate of positive nodes is similar to reports of open PLND. More experience is needed with extended PLND to determine which patients will benefit from this procedure.
VIDEO: ROBOTIC ASSISTED EXTENDED PELVIC LYMPH NODE DISSECTION DURING PROSTATECTOMY FOR HIGH RISK PROSTATE CANCER

Sean Stroup, M.D., Brian Dicks, M.D. Kerrin Palazzi-Churas, MPH, Jonathan Silberstein, M.D., Christopher J. Kane, M.D.
(Presentation to be made by Dr. Stroup)

Objective: Pelvic lymph node dissection (PLND) performed at the time of radical prostatectomy provides important staging information that helps physicians guide further intervention. Although robot-assisted laparoscopic prostatectomy (RALP) has gained rapid acceptance for the surgical treatment of prostate cancer, there is a paucity of data describing concomitant robotic extended PLND. Here we describe and demonstrate our technique of extended robot-assisted pelvic lymph node dissection (RAPLND).

Materials and Methods: Extended robotic assisted pelvic lymph node dissections were performed for high D'Amico high risk patients. Here we present our step-by step approach to RAPLND. The PLND is performed after the prostatectomy but before the anastamosis, thereby ensuring wide mobilization, allowing for firm medial retraction with the robotic arm without disrupting the anastamosis, and limits instrument exchanges. Important steps include: (1) peritoneal incision over the common iliac artery adjacent to ureter, with ureteral identification, (2) wide division of the peritoneum, division of the vas deferens and dissection to the median umbilical ligament, (3) dissection along hypogastric artery with transaction of hypogastric lymph nodes as the proximal extent of the dissection, representing Level III nodes, (4) incision over external iliac vein and dissection along it to the node of Cloquet, (Level I nodes), and (6) dissection of obturator fossa with care to avoid nerve injury (Level II nodes). At this point the “standard” PLND nodes are dissected proximally until they join the initial hypogastric dissection. In this way the standard PLND can be included with the hypogastric nodes in a single specimen. Specimens are retrieved individually and hemostasis is assured.

Results: RAPLND was performed in 105 patients and omitted in 116. Demographics and co-morbidities were similar between the groups. Patients who underwent RAPLND were significantly older (mean age of 62.8 vs. 60.1, p = 0.002), had higher-risk prostate cancer as evidenced by higher mean PSA (9.3 vs. 5.6, p < 0.001), higher D'Amico risk group (p < 0.001), and higher biopsy Gleason sums (p ≤ 0.001). Mean operative time for those who had RAPLND was longer (191 minutes versus 173 minutes, p = 0.004), while EBL, length of stay, and complications were similar. The RAPLND group had a positive margin rate of 26% versus 17% in those undergoing only prostatectomy (p = 0.139). Pathologic Gleason sums were significantly higher in those having RAPLND (p ≤ 0.001). In the RPLND group mean nodal yield was 18.1, and 7 patients (6.7%) had positive nodes.

Conclusions: Extended robotic assisted PLND is a useful tool to aid in the staging of high-risk prostate cancer. Careful attention to anatomic landmarks and a committed approach to the dissection can yield lymph node counts that are comparable to open series. We found only slightly increased operative times in the setting of the expected higher positive margin rate in the RAPLND group. RAPLND can provide valuable additional staging information with minimal increases in perioperative risk.
Objectives: To demonstrate the tips, boundaries, limits and differences between different types of robot assisted pelvic lymphadenectomy.

Methods: Different video clips of robot assisted pelvic lymphadenectomy for both radical prostatectomy and radical cystectomy were reviewed and compiled. Borders of dissection and landmarks were identified based on the goals of dissection. Tips and tricks are reviewed and demonstrated to maximize node count and safe dissection.

Results: During robot assisted radical prostatectomy, the node yield for an obturator and standard lymphadenectomy can be maximized by dividing the vas deferens and dissecting lateral to the external iliac vessels. Developing the paravesical space medial to the internal iliac artery allows for maximal dissection of “Level II” lymph nodes. Demonstration of these borders along with tips and tricks to avoid complications are demonstrated in the video. Additionally, the proximal borders of an extended lymphadenectomy including common iliac, presacral, lateral sacral, para-aortic and para-caval lymph nodes for radical cystectomy are demonstrated. Tips and tricks to avoid vascular complications during extended lymphadenectomy are reviewed.

Conclusion: A complete pelvic lymphadenectomy can be demonstrated and achieved with robotic assistance for either robot assisted radical prostatectomy and radical cystectomy.
ROBOTIC LAPAROSCOPIC RADICAL CYSTECTOMY WITH EXTENDED LYMPH NODE DISSECTION AND ILEAL NEOBLADDER- THE USC EXPERIENCE.

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(Presentation to be made by Dr. Berger)

Introduction and Objective: Radical cystectomy (RC) with extended pelvic lymph node dissection (LND) is the gold standard treatment for invasive urothelial carcinoma (CA) of the bladder. Recent advances in robotic surgical techniques have led to the broader application of minimally invasive oncologic surgery with results comparable to open surgery. We present our technique and initial experience with robotic and laparoscopic radical cystectomy and extended LND.

Methods: From 11/2008 to 10/2009, 15 patients underwent minimally invasive radical cystectomy with extended LND (3 robotic, 12 laparoscopic). In this video, we present a 66 year old man with clinically localized high grade muscle invasive bladder urothelial CA who underwent robotic RC and extended LND. First, posterior dissection was performed. The neurovascular bundles were preserved in an antegrade fashion using athermal dissection techniques caudally to the urethra. Extended LND was then performed, removing all lymphatic tissue within the following borders: inferior mesenteric artery (IMA) superiorly, genitofemoral nerves laterally, nodes of cloquet distally, obturator fossa and presacral regions posteriorly. Lymph nodes (LNs) were submitted in separate packets. The ureters were dissected distally and divided in the deep pelvis. The lateral pedicles were then ligated, followed by anterior dissection and division of the urethra. Ileal neobladder construction was performed extracorporeally, and the urethral anastamosis was performed robotically.

Results: Operative time was 8 hours, EBL was 150mL. Hospital stay- 8 days, complicated only by transient atrial fibrillation. Final pathology- pT2aN0 high grade urothelial CA with 0/50 positive lymph nodes and negative margins. For the 15 patient cohort, mean values were: age-68 yrs, BMI- 27, OR time- 380 min, EBL- 642 mL, hospital stay- 7 days, LNs removed- 31. Overall transfusion rate was 21%, overall complication rate was 40%, 43% of tumors were pT3/pT4, 91% were high grade, 26% of LNs removed harbored metastases, and there were 3 positive margins (2 were CIS of the ureter). Mean follow up is 13 months with no recurrences to date, and no deaths.

Conclusions: Extended LND is critical for maximizing treatment outcomes in radical cystectomy patients. In our experience, it is feasible to successfully and safely perform this dissection in patients undergoing robotic/ laparoscopic radical cystectomy using the open surgery template with equivalent perioperative results.
REMOTE PROCTORING USING THE DAVINCI CONNECT SYSTEM

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(Presentation to be made by Dr. Porter)

Objectives: The learning curve associated with robotic surgery requires intensive training and can be assisted with instruction by a qualified surgical proctor. It has been necessary for the proctor to be present in the operating room with the surgeon. This may require the proctor to travel long distances and be absent from medical practice. Recently, an internet based communication system, called daVinci Connect, has been developed to facilitated remote proctoring.

Methods: daVinci Connect requires the daVinci S system with additional hardware and software upgrade. The endoscopic view provided by the robotic camera is transmitted via a secure internet connection to a laptop at the remote proctors location. The proctor has the ability to perform telestration, which is seen on the surgeons console using the TilePro function. The operative suite is equipped with an auxiliary camera to provide an external view of the patient or the surgeon's console. Two-way audio intercom allows real time communication between surgeon and proctor.

Results: The first case involved proctoring a surgeon in Fort Lauderdale, Florida from Seattle, Washington who was performing a robotic prostatectomy. He had performed approximately 400 prostatectomies and was interested in improving his technique of nerve preservation. The procedure was completed with excellent preservation of the neurovascular bundles. The telestration feature was useful for guiding the console surgeon during dissection of the nerve bundles and the two-way audio allowed communication with minimal transmission delay or talk over.

Conclusions: The daVinci Connect system allows remote proctoring across a secure internet connection with excellent visualization and audio communication. The proctoring platform should facilitate surgeon to surgeon interaction without the need for the presence of the proctor.
Purpose: The diagnosis and treatment of benign prostatic hyperplasia (BPH) makes up a considerable proportion of the urologist’s practice, as it has been estimated that 30% of American males older than 50 years have moderate to severe symptoms. Although medical therapy of BPH has rapidly arisen as a predominant treatment option since the 1980s, surgical management remains an integral tool. Among the surgical options, the standard loop transurethral resection of prostate has remained the gold standard, due to its efficacy and acceptable complication rate. All other surgical options must be measured against it, both in efficacy and in morbidity to the patient. Minimally invasive techniques include stents, microwave, transurethral needle ablation of prostate (TUNA), and lasers. Most recently, the button electrode from Olympus has emerged as a novel surgical tool. The benefits of the button TURP include the use of saline irrigation, decreasing the incidence of dilutional hyponatremia; as well as effective hemostasis throughout the procedure. However, as it is a novel technology, the most effective way to utilize it has not been well described. Through our institutional experience, we offer a method that we have found to optimize efficient tissue ablation as well as continuous hemostasis, offering excellent visualization throughout the procedure.

Methods: Patients were preoperatively evaluated with medical history, physical examination with digital rectal examination, uroflometry, International Prostate Symptom Score (IPSS), and cystoscopy. Those patients with moderate to severe symptoms on IPSS, failure of medical therapy, and cystoscopic evidence of obstruction secondary to prostatic adenoma were offered surgical intervention. A 26-Fr Olympus resectoscope sheath was used for cystoscopy, and it was advanced into the bladder under direct visualization. Bilateral ureteral orifices and verumontanum were identified prior to beginning electrovaporization. The most common method of vaporization emulates the motion of the standard TURP, by extending the button out and retracting it slowly back. Retracting the button slowly aids in hemostasis, however does add significantly to the length of the procedure. During our experience, we have developed a “triple-pass” technique. This consists of passing the button electrode back and forth with three rapid swipes, increasing the pressure on the tissue with each swipe. The prostatic tissue is ablated in a systematic fashion until an expansive channel is achieved. At the conclusion of the case, an 18-fr 2-way catheter is placed.

Results: By performing the Button TURP with the “triple-pass” technique, we are able to quickly ablate tissue as well as achieve excellent hemostasis. The occasional bleeding foci are easily controlled with the button; even more efficiently than the loop due to the larger surface area. Using this technique, we have been able to minimize operative time and decrease blood loss all while creating a channel comparable to standard TURP. Continuous bladder irrigation is unnecessary post-procedure, as effective hemostasis is achieved. In fact, we can show that parts of the procedure can be performed with no irrigation running, a virtual impossibility with standard TURP.

Conclusions: Although the standard TURP remains the gold standard, new technologies are emerging that offer excellent alternatives. The Olympus button TURP using a bipolar generator offers many of the benefits of standard TURP while offering the additional advantages of avoidance of dilutional hyponatremia, excellent hemostasis, and rapid achievement of a prostatic channel. Further studies with long-term data are necessary and are currently underway. However, with the use of the “triple-pass” technique, the efficiency and hemostasis of the button electrode is augmented, and may prove to challenge the “gold standard” status of the standard TURP.
Purpose: Robotic-assisted laparoscopic ureteral reimplantation is an alternative to open surgery for pediatric reflux correction. We describe our robotic extravesical technique that incorporates the principles of open anti-reflux surgery.

Materials and Methods: Robotic extravesical ureteral reimplantation was performed in 32 patients (29 unilateral, 3 bilateral). Intraoperative videos were reviewed. Postoperative voiding cystourethrogram (VCUG) was performed in 23 patients (20 unilateral, 3 bilateral). Patients are secured in supine, steep Trendelenburg position. Camera, instrument, and assistant ports are placed. Upon abdominal entry, the bladder, ureter, and gonadal structures are identified. After peritoneal opening, the ureter is mobilized. A hitch stitch is placed to aid in retraction. A generous extravesical trough is created. Reimplantation is performed in a “top-down” approach: the first suture is placed at the superior aspect of the trough. This creates a new muscle hiatus, facilitates subsequent suture placement, and assists in ureteral retraction. Detrusor reapproximation provides muscular backing and an anti-reflux mechanism. The muscle hiatus is checked for patency, and the ureter gently manipulated to ensure mobility and absence of kinking.

Results: All patients with follow-up VCUG demonstrated improvement – 23 ureteral units had complete resolution; 3 had grade I reflux. There were no intraoperative or postoperative complications. To date, there have been no postoperative urinary tract infections.

Conclusions: Our technique for robotic extravesical reimplantation adapts the fundamentals of open surgery to a minimally-invasive approach. This simplified method demonstrates the ability to perform minimally-invasive urologic reconstruction, with initial results suggesting cure rates that approach those of standard open extravesical repair.
ROBOTIC-ASSISTED LAPAROSCOPIC AUGMENTATION CYSTOPLASTY

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(Presentation to be made by Dr. Kim)

Introduction: Augmentation cystoplasty is an effective procedure which results in a high volume, low pressure storage system. Laparoscopic surgery has dramatically affected urologic practice, and a gradual transition has been made to incorporate it into a wide variety of procedures mimicking its open surgery counterpart. The benefits of a laparoscopic approach include excellentcomesis, decrease post operative pain, decreased hospital stay, and a more rapid return to baseline activities. Due to the technical complexity of this procedure a limited number of centers have adopted this approach.

Purpose: We describe our technique of robotic-assisted laparoscopic augmentation cystoplasty. The accompanying video demonstrates the key steps of a robotic assisted laparoscopic augmentation cystoplasty.

Materials and Methods: Six patients with small volume storage capacity, poor compliance and elevated intravesical pressure underwent laparoscopic augmentation cystoplasty. Two were performed with robotic assistance.

Key Maneuvers:
- A 25 cm segment of terminal ileum intracorporally demarcated.
- Extracorporal ileal patch segment isolation, reconfiguration and bowel anastomosis.
- Anterior cystotomy was performed. Bladder and ileal patch are tagged at 3, 6, 9 and 12 o’clock positions to maintain orientation and prevent mesenteric torsion.

Results: All cases were completed laparoscopically, with no surgical complications. Results including patient questionnaire, and post operative cystograms demonstrate adequate results with no stricture or hour-glass deformities with improved patient symptomatology.

Conclusions: The key point of our technique is laparoscopic technique that mirrors an open surgical approach. As the role of robotic-assisted laparoscopy continues to increase across urologic practice, robotic-assisted laparoscopic augmentation cystoplasty will likely undergo further refinement and acceptance.
TECHNIQUE OF ROBOTIC ASSISTED DISTAL URETERECTOMY AND PSOAS HITCH REIMPLANTATION

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(Presentation to be made by Dr. Whelan)

INTRODUCTION: The gold standard for treatment of upper-tract transitional cell carcinoma (TCC) is nephroureterectomy. For low grade distal ureteral TCC, distal ureterectomy with ureteral reimplantation represents a treatment option. Multiple minimally-invasive techniques have been introduced with the goal of replicating the open approach for this procedure. Currently, there is a paucity of literature for the use of robotic-assisted laparoscopic (RAL) management of distal ureteral TCC. We evaluated our experience with RAL management of distal ureteral TCC.

METHODS: A review of the surgical approach and techniques was performed. In addition, a retrospective chart review was completed on all patients who underwent distal ureterectomy with ureteral reimplantation at our institution.

RESULTS: Four patients with a mean age of 73.5 years underwent RAL distal ureterectomy with ureteral reimplantation for distal ureteral TCC. Mean operative time was 311 minutes (range 225-446 minutes), estimated blood loss 200 mL (range 100-350 mL), and mean length of hospital stay was 4.7 days. With a mean follow-up of 30.5 months (range 12-48 months), only one patient whose pathology exhibited tumor in periureteral tissue developed a recurrence.

CONCLUSIONS: RAL distal ureterectomy with ureteral reimplantation is a feasible management option for patients with low grade distal ureteral TCC.
Purpose: To determine the feasibility and technique of a retroperitoneal robotic-assisted ureteral reimplantation into an ileal conduit.

Materials and Methods: The operative steps are discussed and demonstrated on this video case report of a unique technique to manage uretero-enteric stricture. Patients is a morbidly obese male that underwent a left nephroureterectomy after neoadjuvant chemotherapy for node positive transitional cell carcinoma of both the bladder and left kidney. His single right ureter was anastomosed to the ileal conduit. Post-operatively, he developed acute renal failure and hydronephrosis. Antegrade pyelogram demonstrated a distal stricture that failed endoscopic management.

Results: Minimally-invasive retroperitoneal robotic-assisted laparoscopic reimplantation of his solitary ureter into an ileal conduit was successful. Patient reported minimal pain postoperatively and required minimal narcotics. Urine output from the ileal conduit increased postoperatively and his drain output was minimal. Length of stay was 2 days. Renal function remained stable.

Conclusion: Retroperitoneal robotic-assisted laparoscopic approach to unilateral uretero-enteric anastomotic stricture is a feasible approach and potentially minimized an otherwise very morbid and technically difficult procedure.
TRANSUMBILICAL DISMEMBERED PYELOPLASTY

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(To be presented by Dr. Blumberg)

Introduction: With the advent of newer technology and instrumentation, single incision surgery has become increasingly apparent. We therefore present our experience with single port transumbilical endoscopic surgery for dismembered pyeloplasty.

Material and Methods: Eight patients with clinically symptomatic ureteropelvic junction obstruction underwent a dismembered pyeloplasty. During this procedure a single port system was used initially followed by placing lap ports at the umbilicus. Ureter was dissected up to the renal hilum revealing crossing lower pole vessels in one patient. The ureteropelvic junction was dismembered. While suturing the anastamosis, an additional 5 mm port was placed at the future drain site to facilitate this portion of the procedure on the first case. In the remaining cases the 5mm port was placed at the start of the case.

Results: Eight patients with an average age of 23.3 ± 7.5 (16-31) years underwent a dismembered pyeloplasty via single incision technique. Average BMI was 27.0 ± 7.5 (22.9-33.7) kg/m². Average operative time was 222.3 ± 55.0 (182-285) minutes with an average blood loss of 83.3 ± 57.7 (50-150) ml. Mean length of hospitalization was 2 ± 1 (1-3) days. Average follow up was 2.2 ± 1.3 (1-3.5) months. No post operative complications occurred and no treatment failures to date.

Conclusion: Single incision surgery offers patients an aesthetic improvement to standard laparoscopic incisions with potentially less post operative analgesic requirements. Its learning curve may prevent its wide spread use, however, early use of an additional port at the future drain site may facilitate suturing as well as dissection. Longer follow-up with a larger cohort of patients will be required to verify the durability of this procedure with regards to pain control and overall feasibility.
NATURAL ORIFICE RECTOVESICAL FISTULA REPAIR: TRANSURETHRAL EXCISION AND CLOSURE

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(Presentation to be made by Dr. Nakamura)

Introduction: Minimally invasive surgery has become more progressive over the last few years. The newest techniques involve natural orifice translumenal endoscopic surgery or NOTES.

Materials and Methods: We present the first case of a natural orifice transurethral fistulotomy and repair of a rectovesical fistula. This is a complicated 63 year old morbidly obese gentleman diagnosed with Gleason 8 T1c prostate cancer with previous pelvic radiation. He underwent a panniculectomy and RARP which was complicated by an intraoperative rectal injury recognized and repaired primarily. He developed a rectovesical fistula that was managed by a diverting colostomy. His fistula persisted for 1 year and he eventually underwent a cystolithopaxy and transurethral fistulotomy and repair of a rectovesical fistula. This was done using novel equipment including use of a fistulotomy device (LSI SOLUTIONS Inc, Victor NY), urethral vesicourethral anastomosis device (LSI SOLUTIONS Inc, Victor NY), and titanium knot placement device (LSI SOLUTIONS Inc, Victor NY). The video highlights the key steps in the operation.

Results: Immediate cystogram showed an excellent repair and the patient was discharged home on the day of surgery. His fistula recurred 2 weeks later. At the time of his formal perineal repair, endoscopic examination revealed partial healing of the fistula. His failure was likely secondary to multiple factors including prior radiation and obesity.

Conclusions: Natural orifice transurethral fistulotomy and repair of a rectovesical fistula is a feasible operation. It is an operation associated with minimal pain that can be performed on an outpatient basis that re-creates the tenets of formal open surgery. More cases will need to be completed until conclusions can be made on its long term success to repair the fistula.
URETHRAL RECONSTRUCTION OF COMPLICATED INTRACTABLE POSTERIOR URETHRAL STRICTURES

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(Presentation to be made by Dr. Reyblat)

Introduction: An innovative reconstructive technique was introduced in 1984 to address intractable posterior urethral/bladder neck strictures that can potentially develop following difficult prostate cancer treatment strategies such as salvage radical prostatectomy, radical prostatectomy followed by adjuvant radiation therapy, radiation therapy with follow up transurethral resection of obstructive prostate or marked distraction of the bladder from the urethra following radical prostatectomy. The reconstruction plan employs a safe and relatively simple urethral pull-through procedure to correct the stricture with subsequent placement of an artificial urinary sphincter (Americal Medical System, Minnetonka, Minnesota) to resolve the associated incontinence. All patients in this study had developed refractory bladder neck contractures and after repeated incisions and dilations, had dense posterior urethral strictures involving the external sphincter. The reconstruction solution with a unique urethral pull-through procedure performed perineally and placement of artificial urinary sphincter (AUS), solved both the stricturing and the incontinence.

Materials and Methods: The procedure is performed totally perineally. The urethra is mobilized from the penoscrotal junction to the point of the obstruction in the urogenital diaphragm and transected. This type of mobilization makes 3-4cm of elastic urethra available for reconstruction. The stricture zone is typically 1.5-2.5cm in length, and it is incised and dilated to a 14 Hegar up into the bladder. Ideally a suprapubic catheter has been previously placed or can be placed at this time. The urethra is fixed with chromic suture to 20F Red Robinson catheter that has been pulled through the bladder suprapubically into the perineum. The urethra is then advanced up to just inside the opened bladder neck and the catheter is fixed to the abdominal wall. An AUS cuff is placed as a space holder. The urethra is well vascularized and is allowed to heal in place secondarily. The pull-through catheter is removed in 3-4 weeks. An AUS is placed 6 weeks after the initial surgery and activated 12 weeks after initial reconstruction.

Results: The long-term results in 56 patients have been uniformly excellent. No patient has had to be diverted. Refractory stricturing of the pull-through urethra tends to be minimal (9%) and solvable. Many of these patients had previously been told that they would never urinate, and now can expect to void with a good stream and good control.

Conclusion: Definitive treatment for these seemingly irreparable patients can now be offered in a more timely manner.
A TECHNIQUE FOR VASOEPIDIDYMOSTOMY

Chong H. Choe, M.D., Audrey H. Lesperance, Donald S. Crain, M.D.: San Diego, CA.
(Presentation to be made by Dr. Choe)

Purpose: A video presentation of a technique for vasoepididymostomy.

Materials and Methods: The key and crucial steps are outlined and demonstrated on this video presentation for vasoepididymostomy:

1) Intraoperative fluid exam necessitating vasoepididymostomy
2) Tunica vaginalis opened and epididymis exposed
3) Opening of the tunic of the epididymis and identification of a suitable tubule
4) Tunneling of abd vas through tunica vaginalis and secured to tunic of epididymis
5) Placement of two 10-0 double armed suture through the tubular wall in parallel
6) Placement of third 10-0 double armed suture between previous parallel sutures
7) Tenting of the third suture and subsequent 0.5mm cut made in the tubule with microdissecting scissors.
8) Intussuscepted anastomosis of the tubule into the lumen of the vas deferens.

Results: A video presentation of a male reproductive medicine and surgery fellowship trained surgeon’s technique for vasoepididymostomy.

Conclusion: The video demonstration of a surgical technique for vasoepididymostomy represent the preferences of the fellowship trained surgeon. Further investigation and validation of new surgical techniques and their outcomes are needed for the continued advancement in the field of microsurgical vasectomy reversal.
THE FEASIBILITY OF ROBOTIC VASOVASOSTOMY

Chong H. Choe, M.D., Audrey H. Lesperance, James O. Lesperance, M.D.: San Diego, CA
(Presentation to be made by Dr. Choe)

**Purpose:** A video presentation of the feasibility of robotic vasovasostomies.

**Materials and Methods:** A total of 10 single layer robotic vasovasostomies were completed and recorded. Additionally, 2 double layer robotic vasovasostomies were completed and recorded. Each critical step of the procedure is explained and demonstrated on this high definition (HD) video presentation.

**Results:** 100% patency of 5 single layer robotic vasovasostomies. The average semen analysis (SA) volume was 2.5cc. The average SA density was 20.3 million sperm/cc. The average SA motility was 15%. The remaining 5 single layer and 2 double layer robotic vasovasostomies’ SA are pending. The average age of the patient was 34.2 years of age. The average obstructive interval was 5.5 years. The total OR time was 2:22:30. The average staff robotic vasovasostomy time was 35:30. The average resident robotic vasovasostomy time was 40:30.

**Conclusion:** Robotic single layer and double layer vasovasostomies are feasible. Additional data and pregnancy rates are needed to determine its potential role in the treatment of iatrogenic vasal occlusion.
NEW SURGICAL TECHNIQUE IN PLACEMENT OF VENTRAL URETHRAL ELEVATION SLING SYSTEM IN A MALE PATIENT WITH URINARY INCONTINENCE

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(Presentation of the DVD to be made by Dr. Sassani)

Purpose: Stress Urinary Incontinence (SUI) is one of the major complications after prostatectomy. Conservative management such as Kegel exercises is recommended for the first year after surgery. In patients who do not regain urinary control after the first year, several surgical treatment options are available including: periurethral bulking agents, artificial urinary sphincter, and male urethral sling. In this video we describe a new technique in placement of Ventral Urethral Elevation Sling System (Virtue™) by Coloplast in a patient with urinary incontinence after radical prostatectomy.

Material and Method: Patient was a sixty four years old male with moderate stress urinary incontinence requiring multiple pads per day fifteen months after laparoscopic radical prostatectomy. The surgical technique was as follows: Patient was placed in dorsal lithotomy position with legs positioned at 90 degrees. He was prepped and draped in sterile surgical fashion. A vertical perineal incision was made in the midline exposing ventral bulbous urethra and pubic rami. The bulbospongiosus muscle was exposed and taken off the perineal body. Trans-obturator arms of the sling (inferior extensions) were passed via the perineal incision from medial to lateral through the upper aspect of the obturator foramen. The angle of the introducer was at 10:00 o'clock (on patient's right side) and 2:00 o'clock (on patient's left side) when passing through the obturator foramen. A pre-pubic tract was then created from just anterior to the pubic symphysis and out just lateral to the bulbocavernosus muscle using the needle passer. The pre-pubic wings of the sling were then brought out through the tract. The sling was then tightened by pulling on all four wings. Good tension and urethral support was noted. The transobturator wings were then tunneled additionally in subcutaneous tunnels out through the midline incision. The pre-pubic wings were tunneled medially and crossed. The incision was closed in multiple layers and a Foley catheter was placed. The Foley was removed on post operative day 1.

Results: Patient had successful placement of the Virtue sling with no perioperative or postoperative complications. Patient regained full urinary control with no usage of pads postoperatively.

Conclusion: Placement of Ventral Urethral Elevation Sling System (Virtue™) by Coloplast can be safely performed using the technique described.
VIDEO: THE TRANSOBTURATOR MALE SLING – TECHNIQUE AND A REVIEW OF OUR INITIAL EXPERIENCE

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(Presentation to be made by Dr. Grimsby)

Introduction: Traditional treatments for male stress urinary incontinence include the artificial urinary sphincter (AUS) and bone-anchored male sling. Since 2006, the transobturator male sling has offered a new and minimally invasive treatment. We present a video reviewing the technique of sling placement and a review of our initial experience.

Methods: The transobturator male sling is thought to improve continence by lifting the urethra proximally. An 8 minute video will present a technical review. In addition, a retrospective chart review was performed of all transobturator male slings (AdVance Sling, AMS, Minnetonka, MN) placed at a single institution by a single provider from September 2008 to May 2010. All patients had pre-operative confirmation of stress incontinence by history and physical examination. Success of the procedure was defined as resolution of leakage (cured) or great improvement of leakage (greatly improved) by the Patient Global Impression of Improvement scale and lack of stress urinary leakage on post operative physical exam. All other results were considered failures.

Results: A total of 19 patients underwent sling placement. Average age was 68 years old (45-85). The etiology of incontinence included 16 open or robotic radical prostatectomies, 2 Holmium laser enucleations of the prostate, and 1 transurethral unroofing of a prostatic abscess. The average number pads used per day was 4 (1-8). Seventy four percent (14/19) patients were cured (no leakage) or greatly improved (rare leakage) after surgery. Two of the 3 patients who had no change after surgery had been counseled against a male sling because of the severity of their incontinence and eventually went on to have an AUS placed. There were no occurrences of de novo irritative lower urinary tract symptoms, perineal pain, chronic urinary retention, sling erosion, or sling extrusion at 6 weeks post-operatively. All patients went home on the day of surgery. Follow up was 3 to 17 months.

Conclusion: The transobturator male sling in the properly chosen patient suffering from post-prostatectomy incontinence provides a minimally invasive, low risk, and successful procedure that can be performed with little difficulty as displayed in our video. Success of the procedure depends on proper patient selection which includes documentation of stress urinary incontinence on physical exam or urodynamics, coaptation of the external urinary sphincter on cystoscopy, and mild to moderate urinary incontinence. Our experience has short follow up and a small sample size and thus further research into this area is warranted.
Objective: We present an intra-operative DVD of transcorporal placement of artificial urinary sphincter (AUS). This technique is particularly useful in patients who have failed prior AUS placement. Patients who have experienced cuff erosion, or failure, with a history of radiation are acceptable candidates for this technique.

Methods: We present our operative technique for transcorporal AUS placement. Our patient had failed conventional AUS placement. The cuff is placed transcorporally as proximal as possible, just distal to the crural divergence with minimal dissection in proximity to the urethra.

Results: Our technique is clearly illustrated in this DVD. The patient in this particular video is now continent and very satisfied with his surgical outcome. We have performed the filmed procedure in the same fashion in 6 patients at our center.

Conclusions: Transcorporal artificial urinary sphincter placement is a feasible option for the patient with a challenging urethra. The technique requires less tissue dissection close to the urethra and the corporal tunica, providing an extra tissue layer between the cuff and urethra. It is possible to place the cuff in a proximal position, just distal to the crural divergence with minimal dissection in proximity to the urethra.