Oncology, Bladder Oncology

Video Session 9

Tuesday, June 1, 2010 **1:00 PM-3:00 PM**

V1689
EXPANDING INDICATIONS OF TRANSVESICAL LESS SURGERY

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INTRODUCTION AND OBJECTIVES: The development of LESS surgery in the field of urology has been vertiginous since 2007, with numerous clinical experiences having been reported. A variety of transvesical procedures can be performed with the R-port device. In this video will make mention of two surgical procedures that can have this approach.

METHODS: At the date we had over 35 procedures by R-port transvesical device: Benign prostatic hyperplasia (BPH) N = 35, distal ureterectomy: for Transitional cell carcinoma (TCC) N = 1, reflux vesicourinario (VU) N = 1, vesico vaginal fistula Repair (VVF) N = 1, mesh excision N = 2. In this report we will focus on the realization of the distal ureterectomy and repair of vesicovaginal fistula by using the device R-port by transvesical approach. This video showing the proper identification of surgical steps.

RESULTS: The case of VU reflux the operating time was 55 minutes. No complications. Hospital stay one day and the catheterization time was 6 days. The other case was a VVF repair, had good evolution without complications.

CONCLUSIONS: Development of LESS surgery has expanded the role of intraluminal laparoscopic and robotic surgery. The ability to have robust instrumentation intraluminally creates the possibility of performing complex ablative and reconstructive intraluminal procedures across surgical disciplines.

Source of Funding: None

V1690
ROBOTIC ASSISTED PELVIC LYMPH NODE DISSECTION FOR BLADDER CANCER

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INTRODUCTION AND OBJECTIVES: There has been great debate about the feasibility of robotic assisted pelvic lymphadenectomy. The controversy has been centered on whether the robotic approach is limited at its most cephalad point. A separate concern has been the posterior dissection limit. This video demonstrates that the robotic procedure can simulate the reach of an open technique and can sufficiently obtain nodal tissue to have oncologic efficacy.

METHODS: This video demonstrates the technique of pelvic lymphadenectomy with robotic assistance. The lymphadenectomy is performed following a radical cystoprostatectomy using the da Vinci surgical system. We have used six ports–four robotic and two assistant. The thirty degree telescope with a downward deflection allows for completion of the cephalad dissection. The limits of our lymphatic dissection include all the lymphatic tissue posterior and lateral to the obturator nerve, all nodal tissue between the external iliac vessels and the pelvic sidewall, the node of Cloquet distally, superiorly to the bifurcation of the great vessels, and the presacaral nodes. Paravesical nodes have been removed en bloc with the bladder.

RESULTS: There are several important teaching points delivered in this video. The robotic ports are placed in line with the umbilicus, which is slightly higher than the lower, fan shaped positioning used for robotic prostatectomy. We use meticulous dissection of the iliac vessels, obturator nerve, and genitofemoral nerve. Bipolar electrocautery allows for excellent hemostasis. The nodal tissue is removed progressively and placed into an entrapment sac. The cephalad dissection easily reaches the bifurcation of the great vessels. Posteriorly, we are able to remove all the tissue in the triangle of Marcille. This is an area bounded by the medial border of the psoas major, the lateral margin of the vertebral column and the iliolumbar ligament below. It is crossed by the obturator nerve. All lymph bearing tissue behind the vessels, anterior to the iliolumbar ligament, and below the obturator nerve is removed. Lastly, the fourth robotic arm permits atraumatic retraction. In this index case, 26 nodes were removed from the right side as demonstrated in the video.

CONCLUSIONS: This video demonstrates that the oncologic principles of open surgery may be easily translated to a minimally invasive approach. Our experience shows that there should be no concern for the upper or posterior limit of dissection when using the robotic assistance of the da Vinci system.

Source of Funding: None

V1691
TITLE: ROBOT-ASSISTED MALE CYSTECTOMY: TECHNIQUE OF SPACES

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INTRODUCTION AND OBJECTIVES: Radical cystectomy and pelvic lymph node dissection is the standard treatment for muscle invasive bladder cancer. Recent studies demonstrate that robot-assisted radical cystectomy (RARC) is an alternative approach that is not only safe and feasible, but appears to have equivalent oncologic outcomes in short term follow up. This video presents our technique of development of avascular spaces in robot-assisted radical cystoprostatectomy based on an experience of 160 consecutive cases.

METHODS: Step by step instruction of how to perform robot-assisted cystoprostatectomy is illustrated. It begins with standard port placement and proceeds through the operative steps – including development of three avascular spaces, control of vascular pedicles and lastly anterior exposure with apical dissection.

RESULTS: This video focuses on our technique of defining three avascular spaces - periureteral, lateral pelvic and anterior rectal to set up further dissection of the bladder. The development of the periureteral space begins with the incision of the posterior peritoneum with separation of the visceral fascia and identification of the ureter in the loose areolar tissue. Dissection of the ureter is carried distally to the uretero-vesical junction. One of the caveats in this technique is to avoid early clipping and transection of the ureter during initial dissection. The intact distal ureters act as a landmark in identifying the lateral pedicles and help the surgeon find the correct plane around the bladder to decrease the likelihood of a positive surgical margin in this location. The development of the lateral pelvic space begins with incision of the posterior peritoneum lateral to the umblical ligaments. This avascular areolar space is opened and the vas deferens is divided. The bladder is still left attached to the anterior abdominal wall and provides natural anterior retraction. Finally the development of the anterior rectal space begins with incision of the peritoneal reflection of the pouch of Douglas. The plane of dissection is carried distally as far as the apex of the prostate between the anterior sheath of Denonvilliers fascia and the rectum.

CONCLUSIONS: Our technique of space development in robot-assisted male cystectomy provides avascular planes of dissection, and makes use of key landmarks to keep the novice robotic surgeon oriented and prevent dissection close to the bladder that would lead to a positive surgical margin. The technique for RARC has evolved over an experience of 160 cases to provide a minimally invasive option for radical cystectomy.

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