Laparoscopic Ureteroureterostomy in a Porcine Model: A Simple New Technique Using Nonperforating Vascular Clips

Elspeth McDougall, MD, Abdelhamid Elbahnasy, MD
Arieh Shalhav, MD, Ralph Clayman, MD

ABSTRACT

Introduction: Laparoscopic suturing is a tedious procedure which has a long learning curve. Hence, we sought to develop an alternative simple and reliable technique for laparoscopic tissue approximation to enhance laparoscopic reconstructive procedures. In this video, we present our method for using newly developed, nonperforating titanium clips (U.S. Surgical Inc., Norwalk, CT) to perform a ureteroureterostomy.

Method: Ten piglets underwent a unilateral laparoscopic ureteroureterostomy. Preoperative endoscopic ureteral stenting was first performed. After achieving a pneumoperitoneum, the retroperitoneal space was accessed, and the proximal ureter was dissected, opposite the lower pole of the kidney. Transection of the ureter was performed, and a ureteroureterostomy was accomplished with a laparoscopic endovascular stapler (VCS). Tissue approximating forceps (AF) were used to bring the two edges of the ureter together. For application of staples to the posterior surface of the ureter, the tissue approximator forceps were used to rotate the ureter, after which VCS clips could be applied to the posterior surface. A total of 11-14 staples were applied.

Results: The procedure was successful in all animals without any intraoperative complications. The operative time was significantly shorter with the use of the newly developed laparoscopic tissue approximator.

Conclusions: Laparoscopic ureteroureterostomy using VCS clips appears to be a promising method for reconstructive ureteral surgery.

Laparoscopic Cryosurgery of Renal Tumors: A Promising New Technique

David E. McGinnis, MD, Stephen E. Strup, MD

ABSTRACT

Introduction: The treatment of small renal tumors has increasingly been by nephron-sparing methods. Cryosurgery may be an effective nephron-sparing technique, and a laparoscopic approach may further reduce the postoperative morbidity of this approach.

Methods: Three patients with small renal masses (less than 3 cm) and indications for nephron-sparing surgery underwent laparoscopic cryosurgery. Preoperative staging studies revealed no metastatic disease. A retroperitoneal laparoscopic approach through the flank was used, and the tumors were localized with a laparoscopic U/S probe. Needle biopsies were performed, and then a single cryoprobe was placed under U/S guidance. A double freeze technique was employed, and, after the cryoprobe was removed, Avitene was used for hemostasis.

Results: Renal biopsies showed renal cell carcinoma in one patient, oncocytoma vs. renal cell carcinoma (RCCA) in the second, and amyloidosis (AML) in the third. Operative time was 690, 396 and 232 minutes. Estimated blood loss (EBL) was 150, 200 and 50 cc. Postoperative labs showed stable serum creatinine and hemoglobins. One patient with a left-sided tumor had elevated amylase and lipase for 24 hours postoperative. Patients were discharged on postoperative day 4, 2 and 2. Renal imaging two months postoperative was available for two patients and showed lack of enhancement and decreased size of the lesions. There were no urinary fistulas or significant hemorrhage postoperatively.

Conclusions: Laparoscopic cryosurgery is a promising new technique to treat small renal tumors with low morbidity. Longer follow-up will be required to determine recurrence and survival rate.

Sexual Morbidity following Bladder Neck Suspension Using Transvaginal versus Laparoscopic Techniques

Joseph M. Carbone, MD, Arieh L. Shalhav, MD,
Mark A. Wainstein, MD, Deborah S. Smith, MD,
Keegan L. Maxwell, MD, Abdelhamid M. Elbahnasy, MD,
Carl G. Klutke, MD, Elspeth M. McDougall MD

ABSTRACT

Objectives: This study was designed to compare the changes in sexual function following bladder neck suspension (BNS) using the transvaginal and laparoscopic techniques.

Methods: A total of 161 consecutive patients underwent BNS; 87 patients had a transvaginal BNS by a single surgeon (CGK) and 74 patients had a laparoscopic BNS by a single surgeon (EMM). Every patient was mailed a sexual survey derived from the Health Status Profile SF-36 (Response Technologies Inc., East Greenwich, RI). To date, responses have been received anonymously from 48% of the transvaginal group and 42% of the laparoscopic group. Patient groups were comparable regarding age at operation, length of follow-up, satisfaction with postoperative urinary continence, preoperative sexual activity and preoperative ability to achieve orgasm.

Results:

Postop Survey	Transvaginal BNS	Laparoscopic BNS
Sexually active	97%	100%
Loss of orgasm	13%	4%
Vaginal pain	6%	4%
Vaginal numbness	14%	4%

Conclusions: Outcomes research following BNS has traditionally focused on improvements in incontinence and voiding dysfunction. The effect of the surgical management of stress urinary incontinence (SUI) on sexual function may be of importance to a patient's general quality of life. Our initial clinical observations require further evaluation in a prospective fashion with long-term follow-up in a larger patient population.

Back to the Suture 2

Anthony C. Pagedas, MD

ABSTRACT

Objectives: To simplify endoscopic suturing.

Design: Laparoscopic suturing continues to be one of the most difficult elements in laparoscopic surgery. This is why there has been emphasis on developing techniques for knot-tying. These maneuvers are often cumbersome and are difficult to master and teach. New suturing devices are continually being developed to make endoscopic knot-tying easier: Type I - Classic Cable Lock; Type II - Collet Cable Lock; Type III - Self Sealing Cable Lock; Type IV - Lareat Cable Lock; and Type V - Suture with Hemoclip Incorporated onto Suture.

Conclusions: Endoscopic suturing must be so simple that it can be easily learned, hence, easily remembered. The learning curve in endoscopic suturing is inversely proportional to the number of steps required to do the suturing. (Prototypes are being presented to suture manufacturers.)

Laparoscopic Gonadectomy for Diagnosis and Treatment of Androgen Insensitivity Syndrome

Brent N. Davidson, MD, Brad Stetzer, DO, Robert Elkus, MD, William Anderson, MD

ABSTRACT

Objectives: Androgen insensitivity syndrome is the most common form of male pseudohermaphroditism and is estimated to occur in 1 in 20,000 male births. Despite the failure of internal genital formation, the gonads are present and can be located anywhere along the gonadal ridge. These gonads are histologically undescended testicles with a 20-30 percent chance of malignant changes throughout an individual's lifetime. It is therefore recommended that they are surgically removed after the pubertal growth spurt is achieved. Three discrete presentations of this clinical entity are discussed. All of these cases demonstrate the benefits of laparoscopic gonadectomy from the perspective of the surgeon as well as the physical and psychological impact upon the patient with this disorder.■