75% at 10 years, respectively, \( P = 0.13 \)). Conclusions: Patients aged \( \geq 70 \) years are more likely to be upstaged after RRP, but this does not affect cancer control. In addition, nomograms maintain their accuracy and remain valid tools in this rapidly growing patient population.

**Editorial Comment:** It is well recognized that the incidence and prevalence of prostate cancer increase with age. In addition, prostate cancer continues to be a leading cause of cancer deaths among American men. Yet the fact remains that the majority of men diagnosed with prostate cancer will likely die of other comorbid conditions and health problems, such as cardiovascular disease, stroke and diabetes. Because of this consideration, definitive treatment with radical prostatectomy has been controversial for elderly men. In general it is recommended that patients have a 10-year estimated life expectancy to be candidates for surgery. Advancements in population health have continued to increase longevity and raise questions about the ceiling on age for prostate cancer surgery. Research has been limited because of the relatively small number of radical prostatectomies performed in this elderly group.

These researchers conducted a retrospective review of a database of men who underwent radical prostatectomy for prostate cancer. This group included 258 men 70 years old or older, and 3,777 younger than 70. Comparisons were performed between groups to identify differences in survival, and other clinical and pathological characteristics. Older men had higher stage disease, higher pathological Gleason sum scores and a lower frequency of organ confined disease compared to their younger counterparts. In addition, there was more tumor upgrading in older men, although the difference was not statistically significant in a multivariate analysis. Up staging was also observed. However, the accuracy of the commonly used validated predictive nomograms was not altered by patient age. These findings raise important questions about the upper threshold for consideration of surgery in elderly men with prostate cancer. The data support the argument that surgery may be considered in select elderly men, although this decision needs to be made on an individualized basis taking all clinical factors into consideration.

Tomas L. Griebling, M.D., M.P.H.

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**Laparoscopy/New Technology**

A Transition to Laparoendoscopic Single-Site Surgery (LESS) Radical Prostatectomy: Human Cadaver Experimental and Initial Clinical Experience

E. Barret, R. Sanchez-Salas, A. Kasraeian, N. Benoist, A. Ganatra, X. Cathelineau, F. Rozet, M. Galiano and G. Vallancien

Ecole Europeen de Chirurgie and Department of Urology, Institut Montsouris/Universite Paris Descartes, Paris, France


Background and Purpose. Laparoendoscopic single-site surgery (LESS) represents a novel approach to abdominal surgery. Several applications have already been described. Drawbacks include limited range of motion and need for articulated instruments. Robotic technology could overcome such technical difficulties. We report our experience with LESS radical prostatectomy (LESS-RP) in a cadaver and LESS robot-assisted radical prostatectomy (LESS-RARP) in a human patient. Material and Methods. Standard laparoscopic instruments (SLI) and articulated laparoscopic instruments were used in the cadaveric LESS-RP. The da Vinci system was used in the LESS-RARP. Both procedures reproduced standard extraperitoneal laparoscopic prostatectomy as performed at Institut Montsouris. Control of the dorsal venous complex (DVC) and urethrovesical anastomosis (UVA) were key elements evaluated for feasibility. Results. Cadaveric model: Total operative time (TOT) was 160 minutes, with 5 minutes for the DVC (one stitch) and 35 minutes for the UVA (six stitches). Blood loss was 500 mL. Bilateral neurovascular preservation was performed,
and results of final pathologic examination showed negative surgical margins. Conclusions. The human cadaver is an adequate model for LESS-RP, and LESS-RARP is feasible to be performed in the clinical arena. The synergy of robotic technology and LESS represents a new generation of surgery.

**Editorial Comment:** Once LESS nephrectomy was reported in 2007, it was only a matter of time before LESS radical prostatectomy was attempted. Although I have highlighted in this section that LESS techniques are feasible for a variety of urological procedures, there are limited or no data demonstrating their equivalence to conventional laparoscopy. This consideration is particularly important for reconstructive procedures such as radical prostatectomy. Until surgical margins status, urinary control and sexual function data are available confirming equivalence to open and laparoscopic radical prostatectomy, the small cosmetic advantage in older men should not be emphasized as an advantage.

Jeffrey A. Cadeddu, M.D.

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**Laparoscopic Versus Open Simple Prostatectomy: An Evaluation of Morbidity**


Division of Urology, Institut Mutualiste Montsouris, Paris, France


**Purpose:** To evaluate the morbidity between laparoscopic simple prostatectomy (LSP) and open simple prostatectomy (OSP) in the management of benign prostatic hyperplasia. **Patients and Methods:** From January 2003 through January 2008, 280 consecutive patients underwent adenomectomy either by an extraperitoneal laparoscopic transcapsular “Millin” approach (96 patients, 34.3%) or open transvesical approach (184 patients, 65.7%). Medical therapy had failed in all patients. **Perioperative and outcome data were recorded and compared. Results:** There was no significant difference in patient age, prostate size, uroflow rate, mean International Prostate Symptom Score, operative blood loss, or total time of continuous bladder irrigation between the two groups. Mean operative time was significantly longer in the laparoscopy group, 95.1 ± 32.9 minutes, vs the open group at 54.7 ± 19.7 minutes (P < 0.0001). Total catheter time was significantly shorter in the laparoscopy group (5.2 ± 2.6 v 6.4 ± 2.9 days; P < 0.001) as was length of hospital stay (6.3 ± 1.9 v 7.7 ± 2.4 days; P < 0.0001). The most common complication between the two groups was hemorrhage, occurring in 27 (28.1%) patients in the laparoscopy group and 54 patients (29.3%) in the open group. Of the 19 urinary tract infections observed between the two groups, 18 occurred in the open group as well as all 9 cases of urinary sepsis. **Conclusions:** LSP offers advantages over OSP in terms of shorter catheter time, shorter hospital length of stay, and fewer urinary tract infections.

**Editorial Comment:** Laparoscopic simple prostatectomy clearly has a shorter convalescence and is a safe alternative to open surgery. In 2009 it should be discussed with patients considering open simple prostatectomy.

Jeffrey A. Cadeddu, M.D.

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**Direct Comparison of Surgical and Functional Outcomes of Robotic-Assisted Versus Pure Laparoscopic Radical Prostatectomy: Single-Surgeon Experience**

A. A. Hakimi, J. Blitstein, M. Feder, E. Shapiro and R. Ghavamian

Department of Urology, Montefiore Medical Center, Albert Einstein College of Medicine, Bronx, New York


**Objectives:** To compare the perioperative and functional outcomes of laparoscopic radical prostatectomy (LRP) and robotic-assisted laparoscopic prostatectomy (RALP) in a single-surgeon series. **Robotic assistance aids the laparoscopically naive surgeon in performing minimally invasive prostate**
surgery by offering superior visualization and dexterity. Methods: The initial 75 patients with ≥12 months of functional data who had undergone RALP by a single surgeon were selected. These were compared with 75 patients who had undergone LRP from a confidential database of the same surgeon experienced in LRP toward the end of his experience with this modality (>300 cases). Results: The patients in both groups were similar with respect to age, preoperative prostate-specific antigen level, biopsy Gleason score, pathologic stage, and positive margin rate. Statistically significant differences were noted in favor of RALP vs LRP with regard to operative time (199 vs 232 minutes, P < .001), intraoperative blood loss (230 vs 311 mL, P = .004), and length of stay (1.95 vs 3.4 days, P < .0001). The 12-month continence rate was 89% after LRP and 93.3% after RALP (P = .56). The potency rate was 71.1% and 76.5% at 12 months after LRP and RALP (P = .64) for a bilateral nerve-sparing procedure, respectively. Conclusions: Our initial experience has revealed that RALP is an equivalent, if not a superior, minimally invasive surgical option for localized prostate cancer with less blood loss and a shorter operative time and length of stay. Although the potency and continence rates were comparable, a trend was noted toward a faster return of functional outcomes in our early RALP experience.

Editorial Comment: There are several studies now demonstrating that there is no statistical difference between robotic assisted and pure laparoscopic radical prostatectomy in terms of margin status, continence and potency recovery. Surgeon judgment and experience, not technology, appear to be the determining factors. What is interesting is why after publishing this article the authors continue with RALP, which is significantly more costly than LRP without any demonstrable improvement in outcomes.

Jeffrey A. Cadeddu, M.D.

Urolithiasis/Endourology

Transvesical Robotic Radical Prostatectomy

M. M. Desai, M. Aron, A. Berger, D. Canes, R. Stein, G. P. Haber, K. Kamoi, S. Crouzet, R. Sotelo and I. S. Gill

Department of Urology, Glickman Urological and Kidney Institute, Cleveland Clinic, Cleveland, Ohio


Objective: To report the technical feasibility of performing transvesical robotic radical prostatectomy (TRRP) in a cadaver. Materials and Methods: TRRP was performed in two fresh male cadavers (prostate volume 46 and 30 mL). In the first procedure we used four laparoscopic transvesical trocars and in the second a single-port device was placed percutaneously into the bladder. Pneumovesiculum was established in both cases and the da Vinci-S robotic system (Intuitive Surgical, Sunnyvale, CA, USA) was used for the TRRP. All steps of the procedure, including dissection of the seminal vesicles and vas deferens, ligation of prostatic pedicles, release of neurovascular bundles, apical dissection, urethral transection, and urethro-vesical anastomosis, were done transvesically and robotically. Real time transrectal ultrasonography monitoring was used in the first cadaver. Results: Both procedures were technically successful transvesically with no need for additional ports or conversion to standard laparoscopy. The operative duration for the multi-port procedure was 3 h and for the single-port procedure was 4.2 h. Clashing of the da Vinci arms was the primary technical difficulty with the single-port procedure, but did not occur in the multi-port procedure. Conclusions: TRRP under pneumovesiculum is technically feasible using multiple-port or a single-port approach in the cadaver. The clinical application of this novel approach is imminent. Further refinement of technique and instruments might lead to an increasing role of percutaneous intraluminal surgery in various surgical disciplines.

Editorial Comment: This group has now performed this procedure in a patient. The following questions loom. What advantages will this approach have over standard laparo-