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TRANSVESICAL SINGLE-PORT LAPAROSCOPIC RADICAL PROSTATECTOMY FOR ORGAN-CONFINED PROSTATE CANCER: AN INITIAL EXPERIENCE OF 20 CASES

Hypothesis / aims of study
Our study aims to investigate the technical feasibility of performing transvesical single-port laparoscopic radical prostatectomy in patients with organ- confined prostate cancer, and explore whether this approach could reduce the risk of incontinence after surgery.

Study design, materials and methods
From Nov 2010 to July 2011, transvesical single-port laparoscopic radical prostatectomy was performed for 20 patients with low risk organ-confined prostate cancer (PSA ≤10 ng/ml, Gleason score <7, and clinical stage T1c or T2a) by a single surgeon (X.G.). A novel port (QuadPort®, Olympus Surgical Technologies Europe) was used percutaneouly into the bladder to establish pneumovesicum through a 4-cm bladder incision. All the operative procedures, including incision of the posterior bladder neck, dissection of the seminal vesicles and vas deferens, ligation of prostatic pedicles, preserving of neurovascular bundles, apical dissection, urethral transection, and urethro-vesical anastomosis, were performed transvesically and laparoscopically.

Results
All of the 20 transvesical single-port laparoscopic radical prostatectomy was successfully performed, and there was no conversion to standard laparoscopic approach or open surgery. Patients were hospitalized for a mean (range) of 14.7 (12–25) days after surgery. The total operative time range was 75-180 min, and the mean operative time was 105 min. The estimated blood loss was 75-500 ml, and no blood transfusion was required. Catheters were removed after a mean (range) of 12.1 (9–16) days. No intraoperative complications occurred. No patient had positive surgical margins. All the cases were continent after removal of the catheter.

Interpretation of results
The insufflated bladder might actually provide an optimal portal of access to the prostate and a direct in-line exposure of the prostate and relevant peri-prostatic anatomy. Recent studies demonstrated that continence-relevant nerves are abundant in the peri-prostatic and prevesical space. The transvesical approach for radical prostatectomy obviates the need for mobilizing the bladder and dissecting the prevesical space, and might further reduce the risk of incontinence after surgery.

Concluding message
Transvesical single-port laparoscopic radical prostatectomy is technically feasible for cases with organ-confined prostate cancer and could reduce the risk of incontinence after surgery.

Disclosures
Funding: Chinese National Natural Science Foundation (30772178), Key Project of Chinese Ministry of Health, Chinese National Hi-Tech Research and Development Program (2007AA021906), and Program of 5010 of Sun-Yat Sen University (2007028). **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** the Ethical Committees of the Third Affiliated Hospital, Sun Yat-sen University **Helsinki:** Yes **Informed Consent:** Yes