PD7-3:

STANDARDIZED PROCEDURE OF ROBOTIC ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY FROM CASE 1 TO CASE 1200

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Purpose: To standardize the procedure of robotic assisted laparoscopic radical prostatectomy (RALP) after evolution, learning and modification from 1200 cases experience. Outcomes of RALP was present.

Materials and Methods: From Dec. 2005 to Apr. 2016, 1200 cases received RALP performed by a single surgeon.

Preoperative: 1.5-Tesla multiparametric endorectal coil magnetic resonance imaging (MRI) was done before 2011, and a 3.0-Tesla magnet with a slice thickness <3.0 mm was used for MRI after 2011. The procedure of RALP was evolutive and modified from learning. Posterior approach from Cul-de Sac, first step was vas and seminal vesicle dissection at case 106. Four robotic arms and six trocars were set at case 180. After dropping of urinary bladder (UB) and bilateral pelvic lymph node dissection were performed. Bladder neck identified and transected is crucial step. The key tricks of the trade was from preoperative MRI, digital rectal examination (DRE) and intraoperative demarcation between UB and prostate by pinch method, perivesical fat, foley catheter waggle and UB distention. Mostly, deep dorsal vascular complex was sutured and ligated to obviate bleeder influencing operative field. Apical dissection may be anterior or retro-apical transected urethra.

Neurovascular bundle (NVB) preservation was assessed according to D'Amico risk classification, biopsy tumor percentage, and MRI. The urethrovesical anastomosis was modified by Van Velthoven's method. Suspension stitches was done about case 30-100 and posterior pelvic reconstruction from 101-1000. No more posterior pelvic reconstruction was done after case 1001, except difficulty case for urethrovesical anastomosis. Normal saline 200 ml for UB challenge was routinely done during intraoperation. Complication (Clavien system) rates were prospectively assessed in 1200 consecutive patients undergoing RALP.

Results: The mean age was 65.90 ± 7.66 yrs and ASA I/II/III was 10%/80%/10%. Mean PSA: 18.17 ± 28.24 ng/ml and Gleason score: 6.88 ± 1.02. Clinical stage T1/T2/T3—4/N1or M1 was 30%/54%/9%/1%and suspicious prostate cancer included 6% of patients. Obese patients (BMI >30), included 6% and 10.5% of prostate volume >70 cm^3, 10.5% of previous transurethral resection of prostate (TURP), 1.1% of salvage-RALP. Decrease tendency of complication rate was 4% after case 600. The trifecta rate was 83% and pentafecta rate was 63%. The 3-year, 5-year, and 7-year biochemical recurrence (BCR)-free survival rates were 79.2%, 75.3%, and 70.2%, respectively.

Conclusion: Preoperation evaluation meticulously, MRI planning and a dedicated robotic team to do RALP intraoperatively. The procedure was standardization step by step. Complication was minimized. Excellent pentafecta rate in patients with NVB preservation. High risk patients was acceptable oncologic outcome.

PD7-4:

SALVAGE ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY (S-RARP)

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Purpose: To report the perioperative, functional and oncological outcomes of salvage robot-assisted laparoscopic prostatectomy (S-RARP).

Materials and Methods: From Dec. 2005 to Apr. 2016, 1200 cases received RARP performed by a single surgeon. Among them, fourteen (1.16%) received S-RARP and enrolled to this study. Mean age was 67.42 (51—79) yrs. PSA level at Initial diagnosis ranged from 3.4—64 ng/ml with mean17.44 ng/ml. Initial clinical stage T1/T2/T3 was 4/8/2 patients. Initial mean tumor percentage in transrectal ultrasound guiding biopsy was 27.29%(4—80%).Initial mean Gleason score was 7.35, and Gleason score ≥8

in 35.7% (5/14). Risk classification low/intermediate/high was in 3, 2 and 9 cases, respectively. Initial treatment was external irradiation in 10 cases, brachytherapy in 2 cases, cyberknife in one and High intensity focused ultrasound (HIFU) in one. Combined with hormonal therapy was8 (57.1%) patients. Nadir PSA level after treatment ranged from 0.1—8.8 ng/ml with mean1.47 ng/ml. PSA level at S-RARP ranged 0.5—8.8 ng/ml with mean 7.96 ng/ml. Duration to S-RARP range from 13 to 60 months with mean 26.9 months after initial diagnosis.

Results: Clinical stage at S-RARP was 8 cases of T2 and 6 cases of T3. Mean console time was 133.8 min (ranged 105—165 min). Estimated Blood loss was 88.93 ml (30—160 ml). Clavien I complication of intraoperative urinary tear with repair in one patients.Final pathology pT2/T3/T4 in 7/5/2 and lymph node metastasis in one patient. Mean tumor volume was 5.5 cm^3 and tumor percentage 14.36% (1—40%). Positive surgical margin was 28.6%(4/14).Contience rate with zero pad in 78.5% (11/14), the timing from 2 weeks to one year after removal of foley catheter. Mild stress urinary incontinence (one pad/ day) in 21.5% (3/14). Neurovascular bundle preservation in 3 patient and postoperatively 2 patient with potent.Mean postoperative followup period from 2 to 50months with mean 30.4 months. Biochemical recurrence (BCR)-free in 11 (78.5%) was noted. Two-year and 3-year survival rate was 50% and 42.9%.

Conclusion: Salvage Robotic-Assisted Laparoscopic Prostatectomy is a technically feasible operation with low complication. Operative time was increased but no significantly increased blood loss. Continence rate was excellent. Potency rate was acceptable. Short-term oncological outcomes are encouragingand necessary with longer follow-up to draw significant conclusions.

PD7-5:

ZERO-ISCHEMIA ROBOTIC ASSISTED PARTIAL NEPHRECTOMY — PRELIMINARY EXPERIENCE IN A SINGLE INSTITUTION

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Purpose: Partial nephrectomy is the reference standard treatment modality for small renal masses. Robotic assisted laparoscopic partial nephrectomy (RPN) is increasingly used. Warm ischemia is thought to be necessary in controlling bleeding and facilitating tumor resection. However prolonged warm ischemia may damage renal function. Herein, we report our preliminary experience on the zero-ischimia RPN.

Materials and Methods: From June 2014 to February 2016, 5 patients underwent zero-ischemia RPN in our institution. Among them 3 were female and 2 were male. The median age was 60 (22—71) years old. The robotic docking and port placement were the same as the conventional warm ischemic RPN. The renal arteries were dissection and zero ischemia was achieved by highly selective control or no control.

Results: The median operation time was 185 (125—250) minutes and median blood loss is 100 (100—450) ml. Three patients did not have any control of the renal arteries at all and 2 patients had a high-selective control of the renal arteries.No intra-operative complication was noted and no blood transfusion was required. The pathological results of the patients were 3 angiomyolipoma, 1 renal cell carcinoma and 1 hemorrhagic renal cyst. The median tumor size was 5.7 (1.6—13) cm. The median R.E.N.A.L score was 7 (4—10).The median hospital stay was 6 (4—7) days and post-operative complication was noted in 1 patient with wound dehiscence. Pre- and post-operative creatinine levelswere 0.86 (0.58—1.09) and 0.88 (0.62—0.9), respectively.

Conclusion: Zero-ischemia RPN is safe and feasible in selected patients even with large tumor size. The renal function could be preserved. Long-term benefits require further investigation.

PD7-6:

CONCOMMITENT ANTERIOR AND POSTERIOR PERIURETHRAL RECONSTRUCTION IMPROVES EARLY CONTINENCE FOLLOWINGROBOT-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY

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