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ROBOTIC SALVAGE RETROPERITONEAL AND PELVIC LYMPH NODE DISSECTION FOR "NODE-ONLY" RECURRENT PROSTATE CANCER

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INTRODUCTION AND OBJECTIVES: Despite primary treatment of prostate cancer with surgery or external radiation therapy, 20-40% of patients relapse within 5 years and 25-35% progress to metastatic disease. Salvage lymph node dissection has been proposed in patients with biochemical recurrence from prostate cancer and nodal involvement only, although the optimal template remains a question of debate. Herein we describe the technique of robotic high-extended salvage retroperitoneal and pelvic lymphadenectomy (sRPLND+PLND) for "node-only" recurrent prostate cancer.

METHODS: Twenty patients underwent robotic sRPLND+PLND for "node-only" recurrent prostate cancer after definitive primary treatment as identified by carbon-11 acetate PET/CT. Our anatomic template extends from bilateral renal artery and vein cranially up to Cloquets node caudally, completely excising lymphatic-fatty tissue from aorto-caval and iliac vascular trees. Meticulous node-mapping assessed nodes at 4 prospectively-assigned anatomic zones.

RESULTS: Median age at salvage RPLND was 64 (45-76), median BMI was 26.4 kg/m2 (21.4 - 41.2), previous primary treatment was radical prostatectomy in 17 patients (85%) and external radiation therapy in 4 patients (15%), median time from primary treatment was 32 months (4-160) and median PSA at sRPLND+PLND was 2.1 ng/dl (0.28 - 38.17). Median operative time was 5 hours (3.5-5.8), blood loss was 100 ml (50-300), and hospital stay was 1 day (1-3). No patient had intra-operative complication, open conversion or blood transfusion. Four patients had Clavien II post-operative complications: flank/scrotal ecchymosis in 1 patient (5%), chylous ascites in 2 patients (10%) and neuropraxia/foot drop in 1 patient (5%). Final histology confirmed positive nodes in 16 patients (20%). Mean and median (range) number of nodes excised per patient was 89 and 80 (41-132) respectively. Mean and median (range) number of positive nodes was 21 and 6 (0-109) respectively. At 2 months post-operatively median (range) PSA was 0.76 ng/mL ($<$0.01-2 ng/mL).

CONCLUSIONS: Herein we describe the detailed technique of robotic high-extended salvage RPLND+PLND for "node-only" recurrent prostate cancer and present the initial experience. Robotic sRPLND+PLND duplicates open surgery, with superior nodal counts and decreased morbidity compared to the published literature. Longer follow-up is necessary to assess oncologic outcomes.

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THE USE OF A NOVEL CURVED-TIP SUCTION DEVICE IN LAPAROSCOPIC AND ROBOTIC UROLOGIC SURGERY

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INTRODUCTION AND OBJECTIVES: To describe the merits of a novel curved-tip suction device in laparoscopic and robotic urologic surgery.

METHODS: A prototype for a laparoscopic curved-tip suction device was designed and produced by a manufacturer of laparoscopic instruments. The curve tip is designed to fit 5 mm, 8 mm, 10 mm, 11 mm and 12 mm laparoscopic trocars. The prototype was then used in over 150 laparoscopic and robotic-assisted prostatectomies, cystectomies, partial and radical nephrectomies and pediatric urology cases

RESULTS: Our experience with the curved-tip suction device for laparoscopic and robotic surgery has been promising in over 150 cases. The concave design facilitates optimal visualization of the focal point of dissection by keeping the working area clear without the suction shaft obscuring the surgical field as with conventional suction devices. This allows laparoscopic and robotic instruments to access tight work spaces without colliding with the suction device. The contour of this suction tip permits suctioning in recesses obscured by organs and bony prominences, which is particularly important when operating in the pelvis as we have seen with robotic prostatectomies and cystectomies. In cases of improper port placement, this device salvages operative conditions by optimizing exposure. Finally, this device allows for more precise and ergonomic tissue retraction without excessive torque that results in tissue injury as with conventional suction devices.

CONCLUSIONS: Based on our experience in laparoscopic and robotic urologic surgery, the use of a curved-tip suction device allows for better visualization of the surgical field, increased space for laparoscopic and robotic instruments to maneuver in the area of dissection and precise atraumatic tissue retraction.

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COMBINING ANTEGRADE AND RETROGRADE DISSECTION DURING SALVAGE ROBOTIC RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: Recently published series of salvage robotic radical prostatectomy for radiorecurrent prostate cancer showed the feasibility and the safety of this complex surgical procedure with favorable perioperative and satisfactory functional outcomes. This video shows surgical steps of a salvage robotic radical prostatectomy with pelvic lymph node dissection for radio recurrent prostate cancer.

METHODS: We present a case of a 60 yr old patient who underwent primary radiation therapy in 2007 for a G7(3+4) prostate cancer. Due to a raising PSA, a prostate biopsy showed a G7(4+3) prostate cancer of the right lobe. A 18F Choline PET/CT was negative for nodal and distant metastasis. With the patient in a steep trendelenburg position a five trocar access was performed. Bilateral extended pelvic lymph node dissection was completed. The Retzius space was developed and the endopelvic fascia bilaterally incised. After sealing the dorsal vein complex with Ligasure, urethral stump was meticulously prepared and transected. The apex was retrogradely dissected up to identifying the Denonvilliers fascia, before moving to bladder neck isolation. Bladder neck was isolated and sectioned and seminal vesicles dissected. The Denonvilliers fascia was identified and opened and the dissection plane, previously prepared retrogradely, was identified. Bilateral extrafascial radical prostatectomy was completed. A Van Velthoven anastomosis with posterior muscolo-fascial reconstruction was performed.

RESULTS: Operative time was 132 minutes. Blood loss was 300 ml. Postoperative course was uneventful and the patient was discharged on 3rd postoperative day. Pathologic examination showed a pT2bN0 G7(4+3) prostate cancer with negative surgical margins. One-mo PSA levels were 0.01 ng/mL. At 6 month follow up PSA level remained 0 and patient was continent.

CONCLUSIONS: Combining retrograde and antegrade dissections during salvage robotic radical prostatectomy may contribute to a safe development of the posterior dissection plane. Salvage robot assisted radical prostatectomy is a feasible treatment option for patients with radiorecurrent prostate cancer.

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