

Unmoderated Posters Transplantation and Vascular Surgery

UP-77

Robotic-assisted Laparoscopic Renal Artery Aneurysm Repair

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Introduction and Objective: Renal artery aneurysms represent a rare entity with an incidence of 0.09-0.3%. Endovascular management has largely replaced surgery when treatment is indicated. However not all aneurysms are amenable to this technique due to location, size, and patient factors. As a result, open surgery was the gold standard for definitive repair. However advancements in laparoscopy have lead to the development of minimally invasive approaches. The DaVinci™ (Intuitive, Sunnyvale CA) surgical platform facilitates complex resection and suturing when compared to pure laparoscopy. We present our technique of robotic-assisted renal artery aneurysm repair.

Methods: A 35-year-old male presented with right-sided flank pain and was found to have a 1.6 cm saccular right renal artery aneurysm. He was seen by an interventional radiologist who felt it was not amenable

to endovascular repair, and was referred for surgery. The patient's BMI was 23.39 kg/m², and blood pressure was 119/80 mmHg. Serum Cr was 0.88 mg/dL and eGFR was >60 mL/min/1.73 m². A "three-armed" robotic approach was used with two 8 mm robotic ports, a 12 mm camera port, a 12 mm assistant port, and a 5 mm port for the liver retractor. The hilar and segmental vessels were dissected, to allow for selective clamping and avoidance of global ischemia during repair.

Results: Operative time was 4 hours and estimated blood loss was 200 cc. Regional warm ischemia time was 44 minutes, and there were no intra-operative or postoperative complications. Serum Cr and Hb on discharge were 0.8 mg/dL and 11.9 g/dL, respectively. Renogram at 3 months post-operative showed excellent perfusion and a split function of 45.4% for the right kidney.

Conclusion: Robotic-assisted renal artery aneurysm repair is technically feasible. Morbidity and short-term functional outcomes are favourable. The use of the DaVinci™ surgical platform facilitates complex resection and suturing.

Unmoderated Posters Trauma, Reconstruction and Diversion

UP-78

Neobladder Urinary Reconstruction at The Ottawa Hospital: Incidence and Function

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Introduction and Objectives: To evaluate the incidence and function of neobladder urinary reconstruction.

Methods: We reviewed a historical cohort of radical cystectomy patients who underwent neobladder urinary reconstruction at our institution between June 2007 and October 2012. Uroflowmetry, postvoid residual volumes, daytime continence, nighttime continence, and urinary retention requiring catheterization were routinely assessed 3, 6, and 12 months postoperative.

Results: During the study period 213 patients had a radical cystectomy and 94 (44%) had neobladder urinary reconstruction. Daytime continence was

72% at 3 months and 89% at 6 months and 89% at 12 months. Nighttime continence was 44% at 3 months, 63% at 6 months, and 75% at 12 months. The incidence of urinary retention was 4% at 3 months, 4% at 6 months, and 16% at 12-months. Age and gender were not highly associated with day or nighttime continence (RR~1.0; $p>0.05$). However, females were more likely to experience urinary retention (RR at 12 months 5.1; $p<0.001$). Ability to completely empty the neobladder at 3 months postoperative (postvoid residual volume <100cc) was associated with increased 12-month daytime continence (RR 1.5; $p=0.08$), increased 12-month nighttime continence (RR 2.3; $p=0.01$) and decreased risk of requiring a urinary catheter (RR 0.6; $p=0.09$). Uroflowmetry was not highly associated with functional outcomes.

Conclusions: A large proportion of radical cystectomy patients at The Ottawa Hospital receive neobladder reconstruction and most patients experience good urinary function. Further study into neobladder mechanics are warranted to evaluate factors associated with urine storage and emptying.