Video Presentations – EUSC 2018 and 15th Annual AAU Conference

[85] Laparoscopic donor nephrectomy

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Objective: To present a live demonstration of laparoscopic donor nephrectomy. Renal transplantation is a universally accepted renal replacement therapy for patients with end-stage renal disease. However, this option of treatment is in its infancy in Dubai and plans are underway to promote renal transplantation programme for the benefit of the dialysis-dependent local population with chronic kidney disease.

Methods: The International Modern Hospital at Dubai is part of Sunrise Group of Hospitals, where an active renal transplantation programme is underway.

Results: The following video is a live demonstration of such a procedure in a patient with two renal arteries. After donor nephrectomy, both arteries were joined together into a single stump at the back table, prior to carrying out renal transplantation in the recipient.

Conclusion: Plans are underway to promote a renal transplantation programme in Dubai.

doi:10.1016/j.aju.2018.10.039

[86] Double-tension adjustments with novel modification on tension-free vaginal tape (TVT)

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Objective: To evaluate the results of novel modifications on tension-free vaginal tape (TVT) in the treatment of female stress urinary incontinence (SUI).

Methods: In all, 16 female patients with a mean (range) age of 49.29 (31–78) years, who underwent anti-incontinence surgery to correct their SUI between June 2010 and August 2014, were included. An in situ anterior vaginal wall sling was prepared, and monofilament polypropylene tape passed below the in situ sling and the standard TVT procedure was performed. Both ends of the mesh in the suprapubic region were labelled with polyglactin 910 (Vicryl\textsuperscript{®}, Ethicon Inc., Somerville, NJ, USA) sutures and left outside the wound. The middle of the mesh in the vaginal region was labelled with a similar suture and left outside the vagina. The Foley catheter was removed on the third postoperative day. The mean (range) follow-up was 8 (5–17) months.

Results: All patients benefited from the surgery; 15 (94\%) of them were completely cured and one patient clinically improved. Urinary retention occurred in one patient, where the tension of the tape was reduced using adjustment sutures. No vaginal mesh erosion was detected during the gynaecological examination postoperatively. No significant post-voiding residue was detected after catheter removal.

Conclusion: This technique provides a feasible option for adjusting the tension of the mesh in the early postoperative period in case of urinary retention. The presence of the intervening in situ sling reduces the risk of vaginal erosion. Long-term success is expected because dislocation of the mid-urethral sling is less likely.

doi:10.1016/j.aju.2018.10.040

[87] Articulated laparoscopic instruments: A new technology to overcome challenging uro-laparoscopic surgery

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Objective: To demonstrate the use of articulated laparoscopic instruments. Technological development in laparoscopic instruments acts as a corner stone in facilitating and overcoming challenges in laparoscopic operations. The laparoscopic ureteric stent guider (LUSG) helps to overcome stenting difficulty. Other challenges like suturing, dealing with tissue areas in acute angles, changing the axis of the instrument from straight to right angle to give the same ability as robotic instruments, are overcome by an articulated instrument called the laparoscopic flexible forceps dissector (LFFD).
Methods: From October 2010 to August 2016, 41 laparoscopic ureteric surgeries were performed. In all, 22 patients underwent laparoscopic pyeloplasty (14 females aged 10–55 and eight males aged 12–45 years). Laparoscopic ureterolithotomy was performed in 16 patients aged 10–38 years. Retrocaval ureter repair was performed in two male cases, with a mean age of 18 years. LUSG was used in 17 cases. From August 2016 to August 2017, the LFFD was used in laparoscopic uro-surgery; five cases of simple nephrectomy (three females and two males aged 38–62 years); three cases of radical nephrectomy (two males and one female aged 45–50 years); and laparoscopic pyeloplasty in one female aged 58 years. LFFD is designed to act like a robotic instrument but is hand-held and reusable.

Results: The mean (range) operation time without LUSG was 2:42 (2:15–3:30) h and with LUSG was 2:15 (2:00–2:25) h, thus the LUSG decreased the operation time by 20–30 min, decreased ureteric over manipulation, and overcame stenting difficulties. The LFFD allows for easy manipulation of tissue and has the ability to flex and reach difficult tissue areas better than standard laparoscopic instruments with faster suture ligation and has movement ability that mimics the Da Vinci robotic instrument.

Conclusion: Articulated laparoscopic instruments are the future of laparoscopic surgery, simple, affordable and more cost-effective than robotic surgery.

doi:10.1016/j.auj.2018.10.041

[88] Laparoscopic partial nephrectomy for posterior hilar tumours: Technique and clinical outcomes

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Objective: To demonstrate our technique and clinical outcomes of laparoscopic partial nephrectomy (LPN) for posterior hilar tumours. Posterior renal hilar tumours, due to their anatomical location, pose some technical challenges for LPN.

Methods: In all, 10 patients with posterior renal hilar tumours received LPN at our institution from November 2015 to May 2018. Our surgical technique involves a transperitoneal approach, full kidney mobilisation to flip the kidney medially for access to its posterior aspect, and the following procedures to the maximum extent possible before artery clamping: intrasinusal dissection upon the intrarenal collecting system and segmental vessels, ligation and division of the vessels supplying the tumour, parenchymal incision through the hilum, and circumferential cortical incision around the tumour with electrocautery. After main or segmental artery clamping, the tumour excision is completed and renorrhaphy is performed.

Results: The median (range) tumour size was 32 (23–55) mm. The R.E.N.A.L. (Radius; Exophytic/Endophytic; Nearness; Anterior/Posterior; Location) nephrometry score was 8 in four patients, 9 in five patients, and 10 in one patient. Five patients underwent surgeries with main renal artery clamping, and two underwent surgeries with segmental artery clamping. The latest three patients underwent surgeries without clamping. The median (range) warm ischaemia time (WIT) was 18 (10–25) min and estimated blood loss was 150 (0–275) mL. Histopathology confirmed renal cell carcinoma with negative margins in all patients. Postoperative urine leakage was detected in two patients. The median change in estimated glomerular filtration rate at 1, 3 and 6 months postoperatively were −11%, −9% and −8%, respectively.

Conclusion: For posterior renal hilar tumours, the described technique is safe and allows a reduction in WIT and preservation of renal function.

doi:10.1016/j.auj.2018.10.042

[89] Robot-assisted hysterectomy and bilateral orchiopexy for a patient with persistent Müllerian duct syndrome

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Objective: To demonstrate robot-assisted hysterectomy and bilateral orchiopexy in a patient with persistent Müllerian duct syndrome (PMDS). PMDS is a relatively rare disorder of sexual development, patients have a 46, XY karyotype and normal male external genitalia, but internal Müllerian duct structures. Usually these phenotypic males have unilateral or bilateral undescended testes, bilateral fallopian tubes, a uterus, and an upper vagina draining into a prostatic utricle.

Methods: We present a 48-year-old gentleman that was referred to our institute as a case of primary infertility and bilateral undescended testes.

Results: Diagnostic laparoscopy revealed a uterus, fallopian tubes with bilateral gonads that were biopsied and showed fibrotic seminiferous tubes. Due to the probable risk of malignant transformation of the remnant Müllerian structures, we counselled the patient for robot-assisted hysterectomy, bilateral salpingectomy and bilateral orchiopexy, upon which he agreed to proceed.

Conclusion: Our video demonstrates this rare syndrome and shows the feasibility of performing such a procedure robotically with good results.

doi:10.1016/j.auj.2018.10.043