

Start	End	Topic	Speakers
		Introduction and pathophysiology	Dominic Lee
		Indication and Surgical techniques	Johan Gani
		Use in primary SUI and Complex SUI	O.Lenaine Westney
		Trouble shooting and use in other situations	O.Lenaine Westney Jang Hwan Kim
		Discussion	Dominic Lee O.Lenaine Westney Jang Hwan Kim Johan Gani

Aims of Workshop

The controversy with the use of synthetic mesh for stress urinary incontinence and vaginal prolapse surgery has meant a return to the basics and to native tissue repairs. The aim of this workshop is to discuss on the development and track record of native tissue use in the management of common Uro-gynaecological conditions. The international faculty will take you through a step-by-step assessment and management of SUI and to a lesser extent prolapse surgery using native tissue grafts. Various surgical techniques will be demonstrated. This will be followed by a series of case discussions by the panel on complex cases for delegates to consolidate on the understanding and utility of fascial repairs.

Learning Objectives

To understand the origin of the fascia repair for stress urinary incontinence and prolapse and the current SUFU/IUGA/NICE recommendations for management of Stress urinary incontinence and vaginal prolapse using native tissue grafts.

Target Audience

Urology, Urogynaecology and Female & Functional Urology

Advanced/Basic

Advanced

Suggested Learning before Workshop Attendance

Optimising the tension of an autologous fascia pubovaginal sling to minimize retentive complications.
Preece PD, Chan G, O'Connell HE, Gani J. *Neurourol Urodyn*. 2019 Jun;38(5):1409-1416.

Rectus Fascia Versus Fascia Lata for Autologous Fascial Pubovaginal Sling: A Single-Center Comparison of Perioperative and Functional Outcomes.

Peng M, Sussman RD, Escobar C, Palmerola R, Pape DM, Smilen SS, Rosenblum N, Brucker BM, Peyronnet B, Nitti VW. *Female Pelvic Med Reconstr Surg*. 2020 Aug;26(8):493-497.

Salvage autologous fascial sling after failed anti-incontinence surgeries: Long term follow up. Sharifiaghdas F, Mahmoudnejad N, Honarkar Ramezani M, Shemshaki HR, Ameri F. *Urol J*. 2019 May 5;16(2):193-197.

Success of autologous pubovaginal sling after failed synthetic mid urethral sling.

Milose JC, Sharp KM, He C, Stoffel J, Clemens JQ, Cameron AP. *J Urol*. 2015 Mar;193(3):916-20

Long-term outcomes of autologous pubovaginal fascia slings: is there a difference between primary and secondary slings?

Lee D, Murray S, Bacsu CD, Zimmern PE. *Neurourol Urodyn*. 2015 Jan;34(1):18-23.

Dr Dominic Lee
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Use of rectus and fascia lata in the management of SUI and POP

Stress urinary incontinence (SUI) and pelvic organ prolapse (POP) are common conditions afflicting women across all developed countries. In this talk we briefly summarise the relevant anatomy of the female external urethral sphincter and relevant supportive structures that contributes to the mechanism of continence. Based on this understanding we explore the pathophysiology of stress urinary incontinence canvassing the various overlapping theories including (i) hypermobility, (ii) intrinsic sphincter deficiency (ISD), (iii) Hammock Theory by Delancey and (iv) Integral Theory by Petros and Ulmsten that led to generated treatment options.

Next, we explore the resurgence of autologous fascia in the management of SUI and to a lesser extent POP in the context of mesh controversy. We look briefly at the evolution of the autologous fascial sling to its current state and review in brief the relevant indications and its position in the AUA guidelines. Biologic tissue grafts used in the management of pelvic organ prolapse repairs have not been well studied and in particular the use of autologous fascia has had limited application.

Finally, we review the relevant outcomes of stress urinary incontinence and POP noting the non-standardisation success definitions which translates to variable success outcomes in the reported literature. The overall cure rate for autologous PVS ranges from 47-97% using objective measures such as pad weight and pad use; and subjective cure rates including quantified pain scores, quality of life questionnaires, and patient-reported satisfaction rates ranges from 51-86%.

Dr Johan Gani
Urologist
Austin Repatriation and General Western Hospital
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Pubovaginal fascial sling surgical technique: tips and tricks (Dr Johan Gani)

There is renewed interest in the pubovaginal fascial sling (PVS) in recent years due to concerns about using mesh material in mid-urethral sling (MUS) surgery. The literature supports the use of PVS with its excellent long-term results, but there are still some concerns about this surgery, in particular with the possible associated morbidities.

This part of the workshop focuses on the surgical tips and tricks to address these concerns. It consists of the following sections:

- Harvesting the fascia:
 - o Fascia lata and rectus fascia videos are both shown. Post-op pain and risk of seroma may depend on how much mobilisation of the rectus fascia before its closure
- Creating the retropubic tunnels:
 - o A blunt technique using the finger is shown that has a low risk of causing bladder perforation
- Piercing the endopelvic fascia:
 - o After creating the lateral vaginal flaps, a technique on controlled piercing of the endopelvic fascia is shown. This has a lower risk of causing pelvic bleeding.
 - o The retropubic tunnels are then widened with the fingers. The sling arms are then pulled through the tunnels.
- Cystoscopy:
 - o A cystoscopy using 30- and 70-degree scopes are performed to check for bladder or urethral injury
- Anchoring the sling:
 - o The sling is anchored in the midline at the level of the bladder neck and placed without tension or hyper-suspending the bladder neck.
- Rectus fascia closure
- Tensioning the sling:
 - o PVS has a higher rate of causing obstruction compared to the MUS. The tensioning technique shown here is based on the author's publication that shows how to reduce this risk without compromising the success rate of the PVS
 - [Optimising the tension of an autologous fascia pubovaginal sling to minimize retentive complications:](#)
Preece, Chan, O'Connell, Gani. Neurorol Urodyn. 2019 Jun;38(5):1409-1416

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The Application of Fascial Pubovaginal Sling

The application of the fascial vaginal sling in complex situations mirrors the initial application of this procedure for the “stove-pipe” urethra and neurogenic bladder over 40 years ago. Currently, some of current utilization of this procedure is driven by the needs of our ever-growing cancer survivorship population, specifically those who have had radiation and extensive pelvic surgery. In evaluating US cancer survivorship, we see that colorectal cancer and gynecological malignancies are high on the list of the increasing numbers of survivors. Thus, these patients are highly likely to have voiding compromised by iatrogenic related compromise of their bladder outlet.

We focus on the situation presented by colorectal cancer in recognition of the high likelihood for the extensive exenterative surgery, in combination, with chemotherapy and pelvic radiation. As demonstrated with recent data, the number of patients who are below 50 who are diagnosed with colorectal cancer is increasing in North America. In the female patient, due to the type of resection even with the robotic approach, there is some denervation to the pelvic autonomic nerves, possible compromise on the basis of anastomotic leaks/postoperative complications and preoperative and/or intra operative radiation therapy. This may be also compounded by destabilization of the fascial support specifically in patients that undergo an abdominoperineal resection during which the endopelvic fascia is violated.

Long term urinary function may be reported in up to 35% of patients. In those who are the most compromised, there may be what is referred to “hostile pelvis” conditions due to an absent true retropubic space, adhesions of small bowel loops to the symphysis pubis or post-operative complications. Vaginal dissection may be challenged by the rigidity and fibrosis related to radiation, foreshortening of the vaginal vault in the event of partial vaginectomy and poor wound healing.

In looking at the orthotopic bladder cancer population, we are presented with the specific difficulties of determining the source of incontinence whether it is sphincteric incontinence, pouch related or secondary to fistula. In the event of sphincteric incontinence, there is a particular challenge in treating these patients considering that the act of voiding is a delicate balance between incontinence and obstruction. The options afforded these patients are very similar to the patient with the native bladder, however, the application of all techniques including bulking agents, transobturator sling and pubovaginal sling are much more complicated and the results are less reliable. Adjustments to placement of the pubovaginal sling in the orthotopic bladder or the neurogenic bladder generally results in planned obstruction rather than continent volitional voiding. Additionally, it may be necessary to adjust suture and tensioning to affect that outcome. Options such as the as adjustable continence balloons or artificial urinary sphincter must be carefully applied and only selected in those patients who are at lower risk for complications such as the neurogenic and/or non radiated patient

In summary, the increasing numbers of oncology patients entering long term survivorship expecting to have improved quality of life requires surgeons to be aware of the adjustments necessary to achieve successful treatment. Patients should be counseled that definitive management may require major surgery with associated complications.

Professor Jang H. Kim
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Complications of Autologous pubovaginal sling (Professor Jang H Kim)

Autologous pubovaginal sling (PVS) represent an effective treatment option for stress urinary incontinence but is not without complications. Reported global complication rate for autologous PVS range from 14% to 29% but the true complication rate is difficult to compare across series due to variability in defining success and lack of reporting adverse advents.

In particular common complications of PVS such as voiding dysfunction, recurrent SUI and outlet obstruction are well documented in the literature. In this presentation we discuss the management of the potential post-operative complications of autologous PVS including:

- De Novo OAB
- **Recurrent SUI- early vs late failures- options**

- Outlet obstruction- timing and technique to treat
 - ***Intervening early compared to later- reason and any data to support***
- Mesh complication patients
 - Delayed vs staged

One of the most common complications involves persistent or de novo urgency with incontinence following surgery. Persistent postoperative urge incontinence has been reported in 10% to 33% of PVS cases which can often be corrected with medications. The incidence of postoperative urinary retention ranges from 2% to 12%. Although the majority of patients will resolve with time due to post-surgical swelling, a small subset of patients between 2% and 7% with urinary retention will require long-term intermittent catheterization and/or additional procedures such as urethrolisis or sling division. This may result in subsequent return of stress incontinence symptoms which should be thoroughly investigated with a formal urodynamic study and can subsequently be offered additional sling surgery or injection of bulking agents depending on the relevant findings.

In conclusion, autologous PVS carries a potential for significant complication, albeit uncommon. When compared generally to MUS procedures, autologous PVS has a higher incidence of infectious complications and voiding dysfunction that may occasionally require surgical management.