

Start	End	Topic	Speakers
		Introduction	Ruchi Singh
		Assessment of female SUI	Ruchi Singh
		Burch Colposuspension remains relevant today	Marcus Carey
		Pubovaginal sling – can it be minimally invasive?	Lin Li Ow
		Bulking Agents: are they effective?	Ruchi Singh
		Looking at ASQHC guidelines, credentialling, training and audit	John Short
		Wrap up and post workshop assessment	Ruchi Singh John Short Marcus Carey Lin Li Ow

### **Aims of Workshop**

Stress incontinence is a common condition and there are multiple surgical procedures with differing outcomes. With recent FDA alert, senate enquiry and adverse media publicity, the hitherto gold standard treatment with mid urethral slings has lost some of its popularity as patients are becoming mesh averse, hence the spotlight has shifted to other available treatments. This workshop aims to provide an overview of management of stress urinary incontinence.

Chair + 3 speakers (total 4)

### **Learning Objectives**

An understanding of the pathophysiology of female stress incontinence and an evidence-based approach to the management.

### **Target Audience**

Urogynaecology and Female & Functional Urology

### **Advanced/Basic**

Intermediate

### **Suggested Learning before Workshop Attendance**

Most attendees should preferably have some background knowledge regarding surgical management of stress incontinence. Any pre learning or pre course assessment forms will be decided upon later once workshop applications is accepted.

### **Assessment of female SUI**

**Ruchi Singh**

Learning Objectives:

1. Initial assessment of stress urinary incontinence including risk factors
2. Understand the value of cough stress test and urodynamics in assessment of incontinence

Urinary incontinence (UI) affects 25–45% of women aged 15 years and older. It has a significant impact on Quality of life and there is a significant financial burden of UI. All types of incontinence are more common with age and obesity hence the public health burden of these conditions is likely to increase with current demographic trends. It has been found that the burden of incontinence is disproportionate to the attention received. The most common type of incontinence is stress urinary incontinence. Stress (urinary) incontinence: Complaint of involuntary loss of urine on effort or physical exertion (e.g., sporting activities), or on sneezing or coughing. “activity related incontinence” might be preferred in some languages to avoid confusion with psychological stress. (IUGA)/ (ICS) Joint Report on the Terminology for Female Pelvic Floor Dysfunction<sup>1</sup>

Understanding the risk factors including ageing, childbirth may well explain the increased prevalence of urinary incontinence in women<sup>2</sup>. The pathology of SUI is multifactorial, with strong evidence pointing to bladder neck and urethral incompetence. Diagnosis of stress incontinence can be based on symptoms alone and urodynamics are not essential. Studies have found that symptoms corresponded to a positive predictive value of 73.7% and a negative predictive value of 58.2%.<sup>3</sup> Initial assessment of stress incontinence would include a detailed history with examination, to exclude concomitant prolapse and exclude extra urethral incontinence associated with a fistula. A cough stress test can be helpful in demonstration of stress incontinence and urethral hyper mobility with good correlation to patient symptoms. Assessment of voiding function and exclusion of a urinary tract infection may be useful in guiding treatment. A fluid volume chart or 3-day bladder diary is useful in assessment of urinary incontinence. It is a record of the amount of water intake, volume and time of each voided urine, the time of retiring for sleep,

and the time of rising during a 24-hour period and is considered more accurate than recall-based measures. This lecture will also address the utility of urodynamics as a diagnostic and prognostic tool in management of stress urinary incontinence. Current guidelines for assessment of stress urinary incontinence are explained especially in the Australian context. Lifetime risk of women undergoing surgery for urinary incontinence or prolapse is around 20%<sup>4</sup> The surgical management of stress urinary incontinence has evolved over the decades with the theory of causation.

References:

1. IUGA/IS joint report on Terminology for female pelvic floor dysfunction. Neurology and Urodynamics . 2019 DOI 10.1002/nau
2. Risk Factors for stress urinary incontinence. Bump RC, Norton PA. Obstet Gynecol Clin North Am; 1998; 25: 723-746
3. Martin JI et al Systematic review and meta-analysis of methods of diagnostic assessment for urinary incontinence. Neurourol Urodyn 2006; 25 (7) 674-83
4. Wu JM, Matthews CA, et al Lifetime risk of stress urinary incontinence or pelvic organ prolapse surgery Obstet Gynecol. 2014 Jun 123(6) 1201-1206

## **Burch colposuspension remains relevant today**

**A/Prof. Marcus Carey**

Urinary incontinence currently affects 14% of Australians and 27% of Australian women who have given birth<sup>1</sup>. First described in 1961<sup>2</sup>, the Burch colposuspension procedure addresses stress urinary incontinence (SUI) secondary to urethral hypermobility and is a truly “native tissue” procedure. In the last two decades, minimally invasive mid-urethral slings have become the dominant form of treatment for stress urinary incontinence. However, negative publicity associated with vaginal synthetic mesh products has extended to transurethral slings and there has been subsequent increasing interest in colposuspension procedures as women and practitioners seek alternative mesh-free treatment options<sup>2</sup>. Although operative time is increased, laparoscopic Burch procedures are associated with no significant difference in operative success or patient satisfaction, with quicker return to normal activities and less blood loss and pain when compared to open Burch procedures<sup>3</sup>. A laparoscopic or robot-assisted Burch colposuspension is an operation that should only be performed by general gynaecologists, subspecialist urogynaecologists and urologists proficient in performing advanced laparoscopic or robotic pelvic floor surgery.

This presentation covers the indications, surgical anatomy, and procedural steps for laparoscopic and robot-assisted Burch colposuspension. Video demonstrations of laparoscopic and robot assisted Burch colposuspension procedures highlight dissection into the retropubic space, reflection of the bladder off the vaginal tissues, optimal suture placement, suture tensioning, and knot tying.

The Burch colposuspension has continence rates of 85-90% at 1-year postoperatively and 70% at 5-years and may be complicated by bleeding (with need for transfusion or haematoma 2%), bladder injury (0.4-10%), ureteral kinking (0.2-2%), infection (urinary 4-40%, wound 4-11%) and voiding dysfunction (25%)<sup>2</sup>.

The Burch colposuspension may be performed concomitantly with pelvic organ prolapse (POP) surgery. It is a logical accompanying anti-incontinence procedure for women with POP and SUI undergoing abdominal, laparoscopic, or robotic-assisted POP surgery such as sacral colpopexy, hysteropexy and hysterectomy. Burch colposuspension reduces the prevalence of stress incontinence in women who undergo sacral colpopexy<sup>4</sup>.

The Burch colposuspension provides women with a mesh-free, native tissue option for bothersome SUI non-responsive to conservative treatment. Laparoscopic and robot-assisted approaches provide the benefits of minimal access surgery (MAS) compared to open surgery. However, MAS approaches to Burch colposuspension are highly technical which has important implications for surgical training.

References:

1. Continence Foundation of Australia. Continence in Australia: A Snapshot. June 2019. Available: [https://continence.org.au/data/files/Reports/Continence\\_in\\_Australia\\_Snapshot.pdf](https://continence.org.au/data/files/Reports/Continence_in_Australia_Snapshot.pdf)
2. Sohlberg EM, Elliot CS. Burch Colposuspension. Urol Clin N Am 46 (2019) 53–59.
3. Carey MP, Goh JT, Rosamilia A, et al. Laparoscopic versus open Burch colposuspension: a randomised controlled trial. BJOG 2006; 113:1007-13.
4. Brubaker L et al. Abdominal Sacrocolpopexy with Burch Colposuspension to Reduce Stress Urinary Incontinence. N Engl J Med 2006; 354:1557-1566  
DOI: 10.1056/NEJMoa054208

## Pubovaginal sling – can it be minimally invasive?

Lin Li Ow

Stress urinary incontinence is a common problem affecting up to 50% of women worldwide<sup>1</sup>. Mid-urethral slings have been the most frequently surgical intervention for the treatment of stress incontinence since its introduction in 1996 by Dr Ulf Ulmsten<sup>2</sup>. However with the release of FDA safety communications in 2008 and 2011, synthetic mid-urethral slings have come under scrutiny. Many pelvic floor surgeons are looking for alternative options that avoid mesh for the treatment of stress urinary incontinence.

Price in 1933 was the first to describe the fascial suburethral sling using the fascia lata graft<sup>3</sup>. This was popularized by Aldridge in 1942 using the rectus fascia sling<sup>4</sup> and in 1991 Blavias and Jacobs reported the use of the pubovaginal sling for complicated SUI<sup>5</sup>.

The cure rates of pubovaginal slings are similar to mid-urethral slings<sup>6</sup>. However, the traditional pubovaginal sling involves an abdominal incision and hence a longer recovery. Using a graft from the fascia lata negates the need for an abdominal incision making it minimally invasive.

In this talk, we will go through the technique of harvesting the fascia lata graft and performing the pubovaginal sling.

### References

1. Australian Institute of Health and Welfare. Incontinence in Australia <http://www.aihw.gov.au/publication-detail/?id=60129543605> [accessed Oct 2021]
2. Lee J, Dwyer P Age-related trends in female stress urinary incontinence surgery in Australia – Medicare data for 1994-2009 50;6: 543-549
3. Price P. Plastic operation for incontinence of urine and of faeces Arch Surg 1933, 41:11-19
4. Aldridge A. Transplantation of fascia for the relief of urinary stress incontinence Am J Obstet Gynecol 1942, 44: 398-411
5. Blavias JG, Jacobs BZ Pubovaginal fascial sling for the treatment of complicated stress urinary incontinence J Urol 1991; 145: 1214-1218
6. Fusco F. Updated systematic review and meta-analysis of the comparative data on colposuspensions, pubovaginal slings, and midurethral tapes in the surgical treatment of female stress urinary incontinence.

## Bulking Agents: are they effective?

Ruchi Singh

### Learning Objectives:

1. Understanding Intrinsic sphincter deficiency in causation of SUI and mechanism of urethral bulking
2. Available urethral bulking agents with evidence guiding usage
3. Role of bulking agents as compared to mid urethral slings in the current mesh averse environment

Pathophysiology of stress incontinence includes intrinsic sphincter dysfunction (ISD) which usually results from loss of function of both the internal and the external sphincter mechanism with potential devascularization and/or denervation of the bladder neck and proximal urethra. deficient sphincteric mechanism. It is characterized by an open bladder neck and proximal urethra at rest, with minimal or no urethral descent during stress.<sup>1</sup> With the recent FDA alert and senate enquiry there has been a renewed interest in Bulking agents as a viable treatment option for stress incontinence as noted in a recent publication analyzing surgical trends in Australia.<sup>2</sup> The mechanism of action of urethral bulking would include reduction of the inner diameter of the urethra leading to coaptation of the urethral lumen, increased urethral resistance-coaptation of the urethra during the storage phase leading to increased continence. An elevation of the urethral mucosa is obtained by injecting the bulking agent into the submucosal space resulting in increased coaptation and urethral resistance. The bulking material may function as additional central filler volume, which increases the length of the muscle fibers and thereby the power of the urethral sphincter with no increase in detrusor pressure.<sup>3</sup>

Urethral bulking agents are typically used in women wishing to avoid major surgery or mesh tapes, recurrent SUI after failed primary surgery, women who accept a lower cure rate in favour of a less invasive procedure with a lower risk of voiding difficulty, women with co-morbidities precluding invasive surgery requiring anaesthesia and younger women who desire future pregnancy prior to definitive surgical treatment.

In this talk we will go through available bulking agents with evidence regarding their efficacy in treatment of stress urinary incontinence.<sup>4</sup> There will also be a summary on cost effectiveness of bulking agents. This session will focus on the optimal techniques for doing urethral bulking. A brief commentary on current guidelines and Australian Commission on Safety and Quality in Health Care recommendations would explain the role of urethral bulking.

### References:

1. International Continence society (ICS) Report on the terminology for Adult Male Lower Urinary tract and pelvic floor symptoms and dysfunction. Neurourol Urogyn. 2019 DOI 10.1002/nau.23897

2. Mathieson et al. Stress urinary incontinence in the mesh complication era: current Australian trends BJU International Vol 128, issue 1 July 2021 Pg 95-102
3. Klarskov N, Lose G: Urethral injection therapy: what is the mechanism of action? Neurourol Urodyn 2008, 27: 789-792
4. Capobianco G et al Efficacy and effectiveness of bulking agents in the treatment of stress and mixed urinary incontinence: A systematic review and meta-analysis. Maturitas, Vol 133, March 2020 Pg 13-31

**John Short**

**Looking at ASQHC guidelines, credentialling, training and audit**

This presentation will cover the clinical governance response to the reports of adverse outcomes from pelvic mesh surgeries and subsequent government enquiries. Topics covered include the care pathways for Urinary Incontinence, the key principles and criteria for credentialing in mesh surgeries, an overview of the Royal Australian and New Zealand College of Obstetrics and Gynaecology minimum training standards for pelvic floor procedures and the ongoing requirements for outcome monitoring and audit.