Outcomes of MUS surgeries for SUI among Taiwanese women

部定 副教授 孫茂榮

台灣婦女泌尿暨骨盆醫學會 理事長 2019-2022
彰基 婦產部 婦女泌尿暨骨盆重建科主任
彰基 婦產部 婦女泌尿健康中心 主任
亞太婦產科醫學會 婦女泌尿委員會 主席 2019-2022
台灣婦產科醫學會 理事
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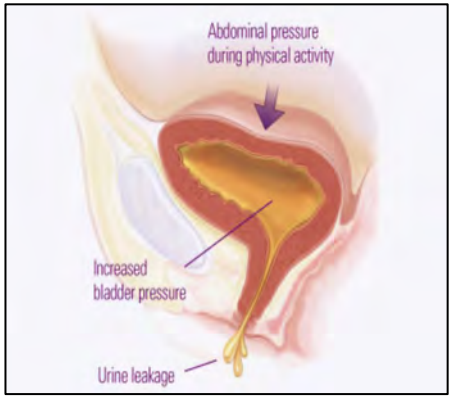
Stress Urinary Incontinence(SUI)

25% female population > 50 years *GD Chen 2003*



involuntary leakage on effort or exertion, or on sneezing or coughing

- **work**
- **exercise**
- **leisure tivities**

Common Treatment Options for Stress Incontinence

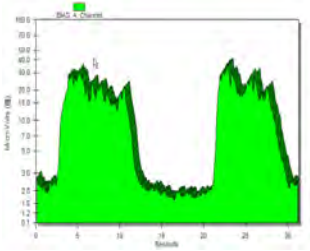
Non-surgical treatment

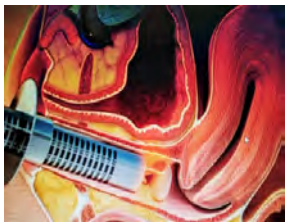
- **Behavior therapies:**
  - Pelvic floor muscle exercises
  - Drinking fluids
  - Healthy lifestyle changes
  - Bladder training
- **Medicines:**

NO medicine approved by US FDA
Duloxetine? Imipramine?

- **Devices, pessary**
- **Extracorporeal Magnetic Innervation**
- **Vaginal laser**

- Less invasive
- Improvement, but cure rates low
- Considering further Childbearing
- Response dependent on patient compliance



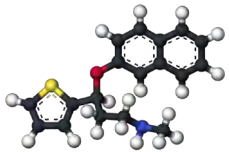


Duloxetine versus placebo for the treatment of women with stress predominant urinary incontinence in Taiwan: a double-blind, randomized, placebo-controlled trial

BMC Urol. 2008 Jan 25:8:2

Alex Tong-Long Lin, Mou-Jong Sun, et al

- Decrease in IEF was significantly greater in duloxetine-treated than placebo-treated women (**69.98%** vs 42.56%, P < .001).
- Treatment-emergent adverse events (TEAEs) were experienced by more duloxetine-treated than placebo-treated women (**80.0%** vs 44.3%, P < .001).
- Discontinuations due to adverse events were significantly greater for duloxetine-treated than placebo-treated women (**26.7%** vs 6.6%, P = .003).



中文商品名：千憂解

作用機轉: 血清素與正腎上腺素回收抑制劑(SNRI) serotonin-norepinephrine reuptake inhibitors

適應症：重鬱症、糖尿病週邊神經痛、廣泛性焦慮症

副作用：噁心、口乾、嗜睡、便秘、食慾降低、多汗

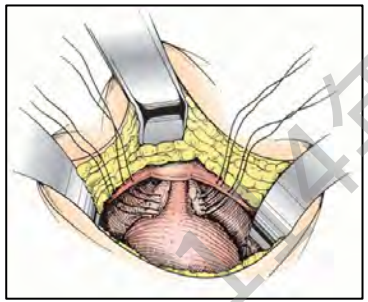
Common Treatment Options for Stress Incontinence

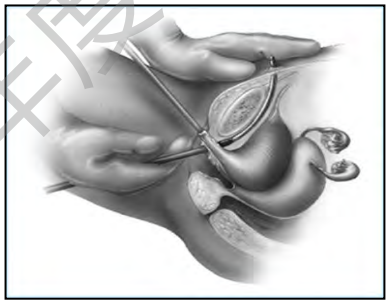
Surgical treatment

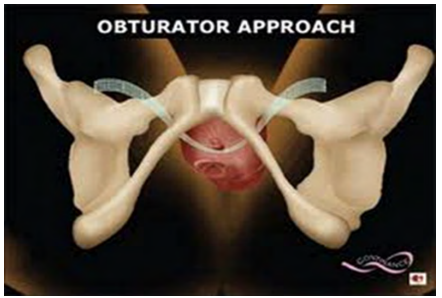
- Women without sufficient improvement with initial treatment
- Response less dependent on patient compliance
- Surgery offers **high cure rates** for SUI，at **70 to 80 %** for surgery versus **40 %** for PME

N Engl J Med 2013; 369:1124

- **Invasive** with risk of intraoperative and postoperative complications
- More **rapid** and **definitive treatment** who are willing to accept risks of surgery







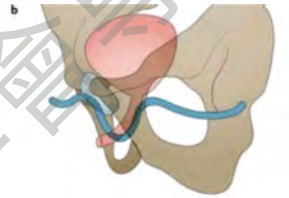
Surgical treatment

- **Midurethral sling procedure(MUS)**

  most common procedure

  minimally invasive procedure

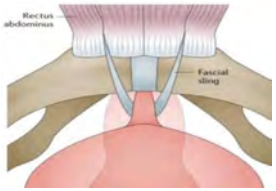
  places a small piece of sling under the urethra



- **Bladder neck sling procedure**

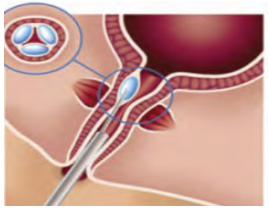
  for recurrent SUI

  places the fascia at the bladder neck



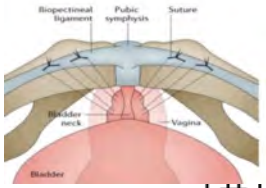
- **Bulking agents**

  materials injected into tissues around the bladder neck



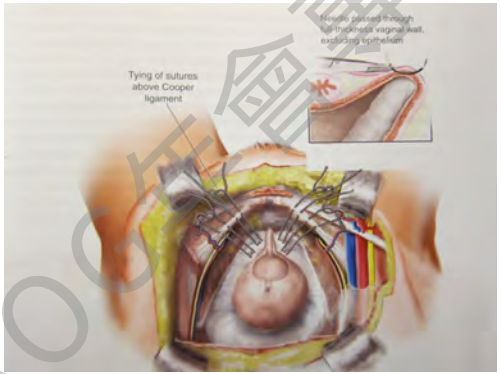
- **Burch colposuspension**

  sutures lift and support tissues near the bladder neck and upper part of the urethra



Burch colposuspension

J. Burch (1961)

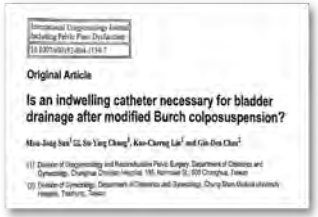


Burch JC. Urethrovaginal fixation to Cooper's ligament for correction of stress incontinence, cystocele, and prolapse.

Am J Obstet Gynecol. 1961;81:281–290.

Cure rate: time –dependent ,1 year 85%,10-12 year 69% *(Alcalay 1995)*

Is an indwelling catheter necessary for bladder drainage after modified Burch colposuspension?


Original Article

Is an indwelling catheter necessary for bladder drainage after modified Burch colposuspension?

Sun MJ *Int Urogynecol J (2004) 15: 203–207*

	Group A n= 42 Remove next morning	Group B n= 43 Remove: 5th day	P value
Outcome and complication			
Hospital stay (days)	5.3 (3-14)	7.4 (4-13)	0.000
Postoperative bacteriuria	7 (16.6%)	10 (23.3%)	0.448
Voiding difficulty	1 (2.4%)	4 (9.3%)	0.360
Felt incomplete emptying	7 (16.7%)	7 (16.3%)	0.962
Frequency and/or urgency	8 (19.0%)	6 (14.0%)	0.527
Subjective outcomes			
Dry	33 (78.6%)	32 (74.4%)	0.652
Improved	8 (19.0%)	9 (20.9%)	0.828
Failure	1 (2.4%)	4 (4.7%)	1.000

Are there any predictors for failed Burch colposuspension?

Sun MJ *Taiwanese J Obstet Gynecol 2006;45(1):33–38*

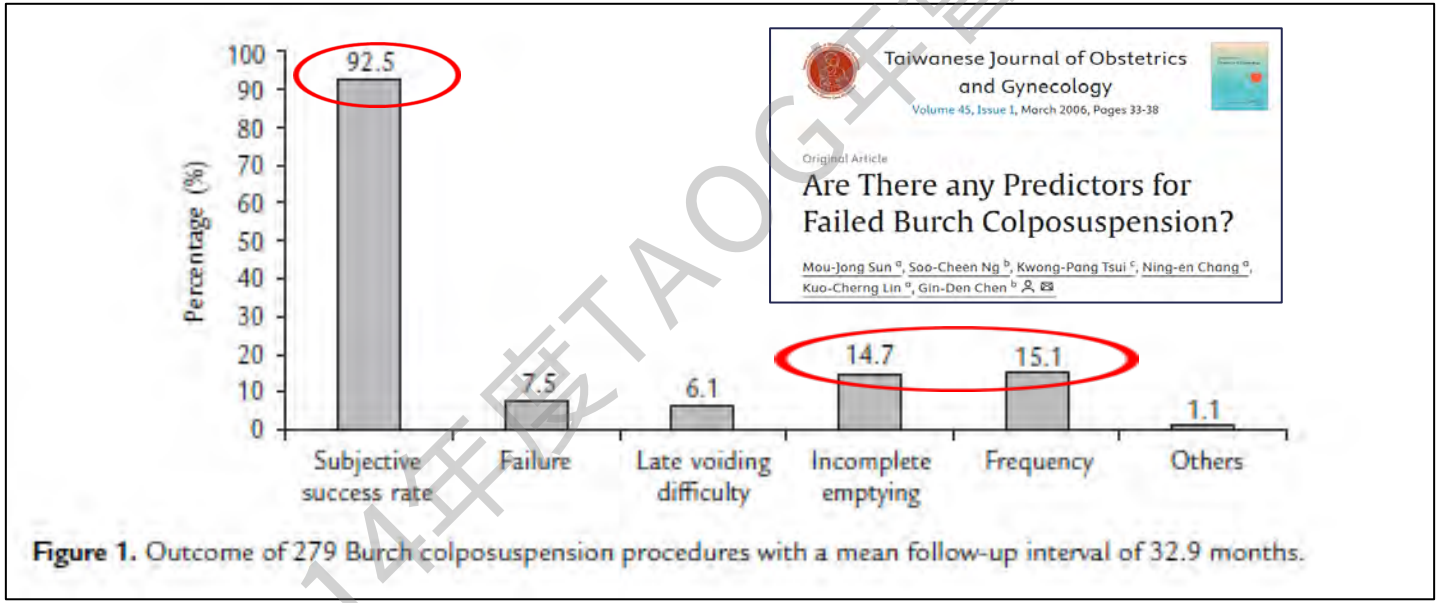
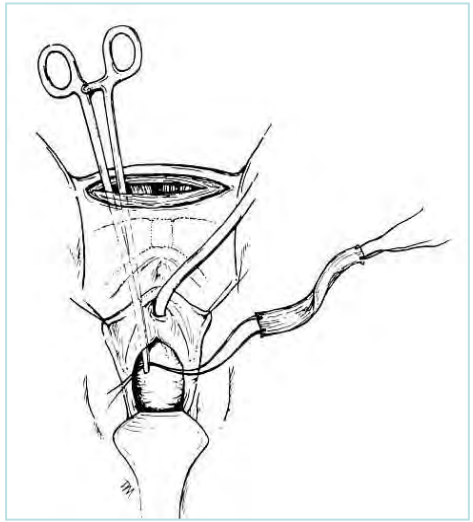


Figure 1. Outcome of 279 Burch colposuspension procedures with a mean follow-up interval of 32.9 months.

Pubovaginal sling (bladder neck sling, needle suspension)



Mean continence rates:

- **Recurrent SUI 85%**, first 94% *Jarvis,1994*
- Type II 91%, **type III (ISD) 84%** *Morgan et al 2000*

Higher rates of adverse events:

- Voiding dysfunction
- De novo urge

Cochrane review, Rehman et al 2011

Outcomes of tranditional SUI operations

TABLE I. *Objective cure rates for first procedure and recurrent incontinence*

Procedure	Mean, % (95% CI) First Procedure	Mean, % (95% CI) Recurrent Incontinence
Slings	93.9 (89.2–98.6)	86.1 (82.4–89.8)
Burch colposuspension	89.8 (87.6–92.1)	82.5 (76.3–88.7)
Needle suspension	86.7 (75.5–97.9)	86.4 (72.4–100)
Anterior vaginal repair	67.8 (62.9–72.8)	NA (NA)
Injectables	45.5 (28.5–62.5)	57.8 (43.2–72.4)

CI = confidence interval; NA = not available.
Adapted with permission from Br J Obstet Gynaecol.[18]

Good cure rates

Complications of the two traditional SUI operations

BURCH COLPOSUSPENSION

Voiding disorders	3 - 32%
Genitourinary prolapse	2.5 - 26.7%
Pelvic pain	12%
De novo detrusor instability	4 - 18%

Jarvis, BJOG Feb 1994

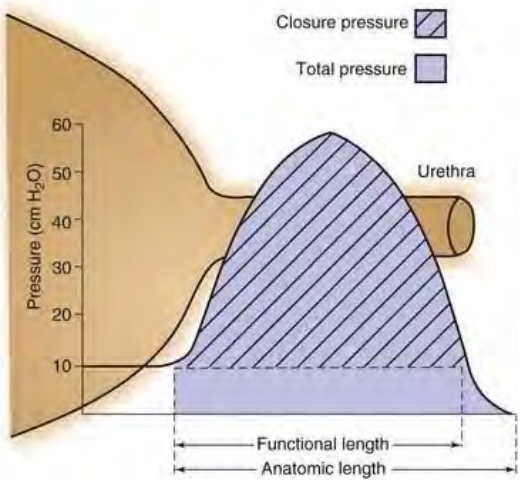
PUBOVAGINAL SLING

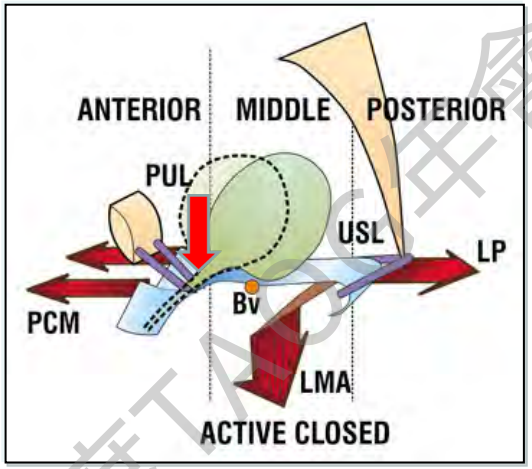
Prolonged urinary retention	2-12%
De novo urgence	3-24%
Erosion	0-25%
Suprapubic wound complications	0-20%

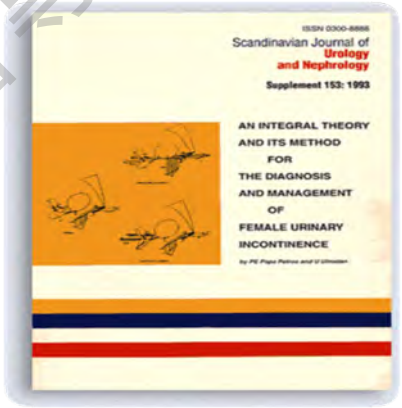
Mc Guire 2000

Invasive , high complication rates

The Integral Theory





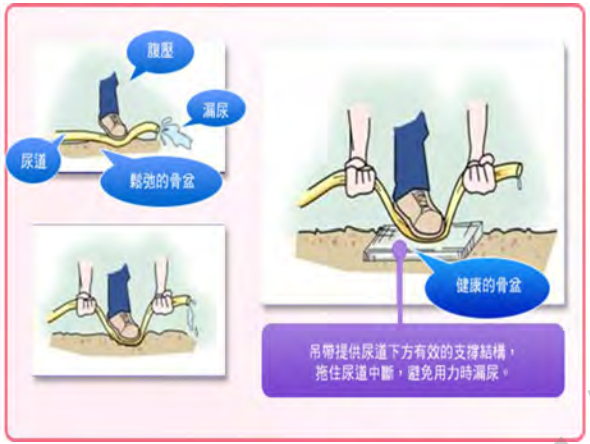


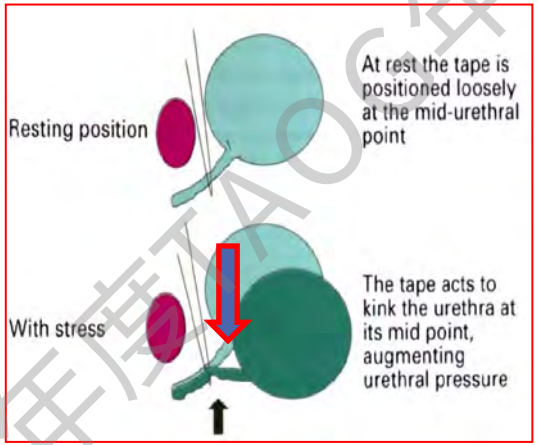
Petros and Ulmsten (1990)

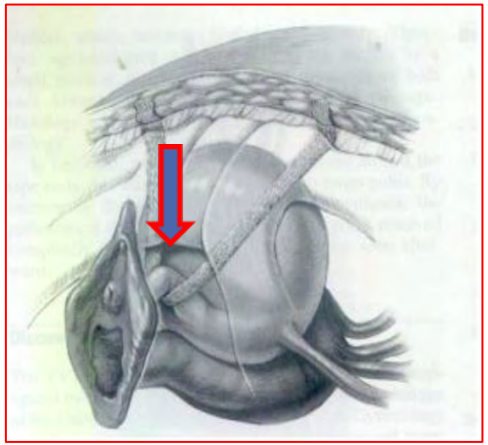
- Stable pelvic support structures cause mid-urethra dynamic kinking under increased pressure.
- Major milestone of the design of tension-free midurethral sling as a treatment for SUI

Midurethral Sling (MUS)

kink midurethra → Augmenting urethral pressure





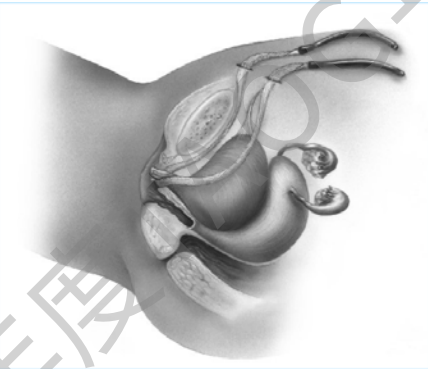


Tention Free Vaginal Tape (TVT)

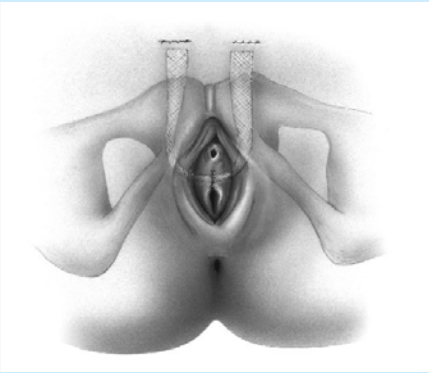
1995 Ulmsten

First new generation minimally invasive operation

Retropubic route



Under mid urethra

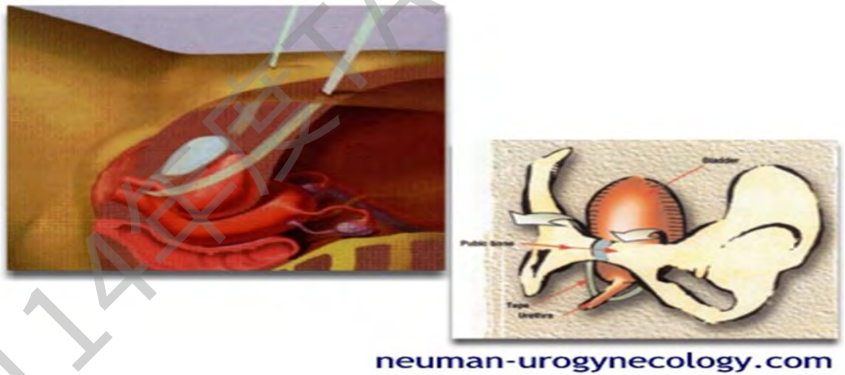


U-shape tension- free tape

Long-term outcomes of the TVT

- 10-year follow-up : objective cure **89.9 %**, subjective cure rate 76.1 %. ***Svenningsen R 2013***

- **17**- year follow-up : objective cure **over 90 %** , subjective cure rate :87%. ***Nilsson CG 2013***



TVT complications

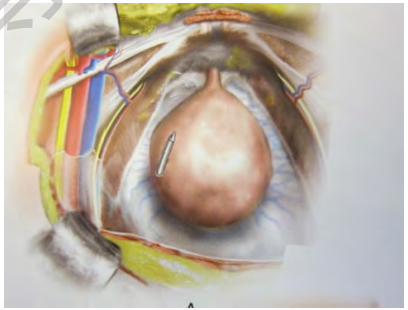
TABLE IV. *Reported complication rates for tension-free vaginal tape (TVT) procedure*

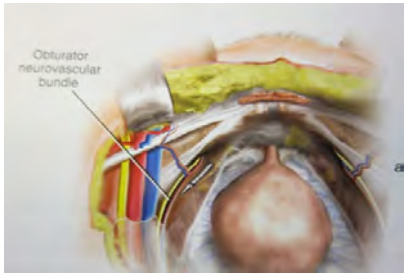
Complication	Patients* (n)	Median Reported Complication Rate (%)	Range of Complication Rates (%)
Perforation bladder	412/8229	6.3	0.0–24.2
Bleeding	113/7255	1.7	0.0–6.7
UTI	124/2178	7.0	3.16–21.2
Short-term voiding difficulty	373/4357	7.5	0.0–40.0
Long-term voiding difficulty	266/5230	3.7	0.0–40.0
Urgency/de novo DO	189/3875	5.0	0.0–60.0
Vaginal/urethral erosion	13/1106	—	0.0–0.97
TVT takedown	112/6219	—	0.0–20.0
Nerve injury	5/1661	0.6	0.21–0.97
Bowel injury	2/2831	1.4	0.04–0.78

DO = detrusor overactivity; UTI = urinary tract infection

* *Number of patients with the complication divided by the total number of patients in all studies reporting that complication. The variation in denominator reflects the discrepancy in reporting complications.*

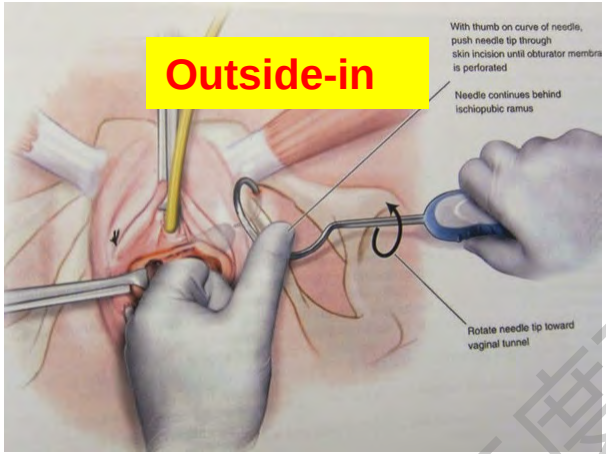
Adapted from Int Urogynecol J Pelvic Floor Dysfunct.[63]



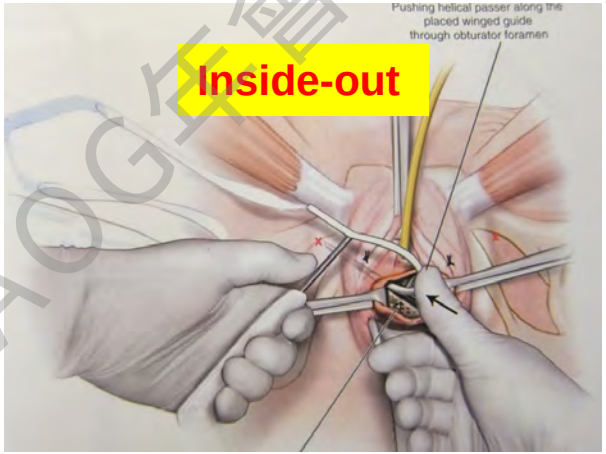


The transobturator approach tape TOT

second generation 2001

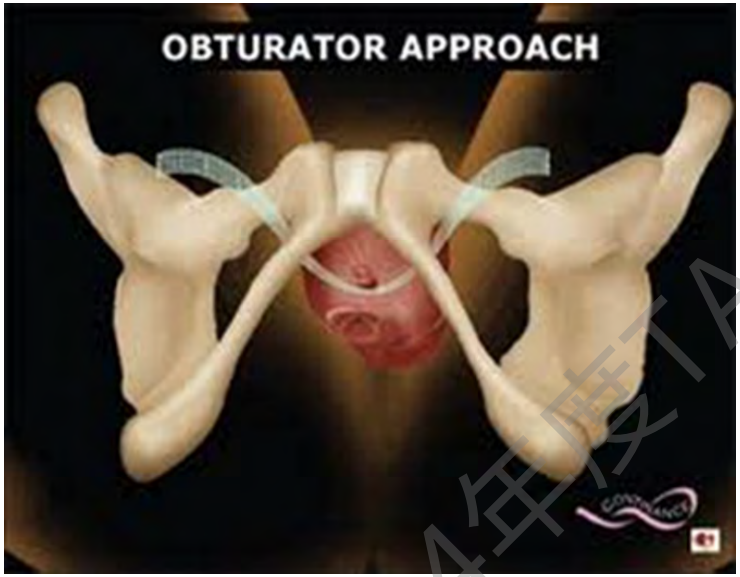


E Delorme 2001



de Leval 2003

Hummock V- shape transobturator tape (TOT)



Minimizing risk of T VT ：

Bladder perforation

Retropubic hematoma

Bowel injury

A prospective randomized trial comparing TVT and TOT suburethral tape for female SUI

de Tayrac et al, Am J Obstet Gynecol 2004

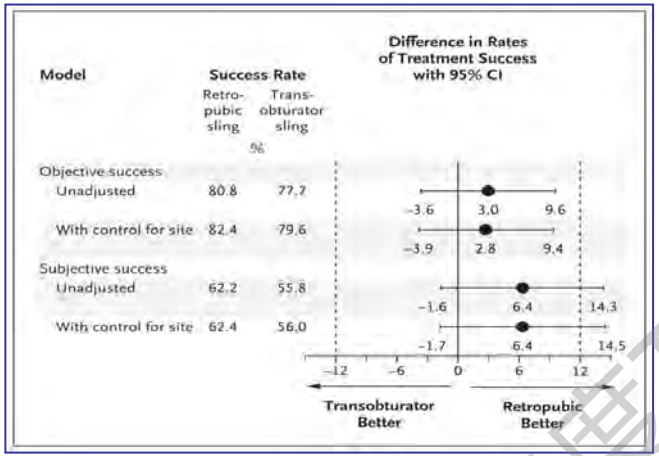
	TVT(n=31)	TOT(n=30)	P
Op. time (min)	27	15	<0.001
Bladder injury (%)	9.7(n=3)	0	>0.05
Urine retention (%)	25.8	13.3	NS
Cure rate (%)	83.9	90.0	NS

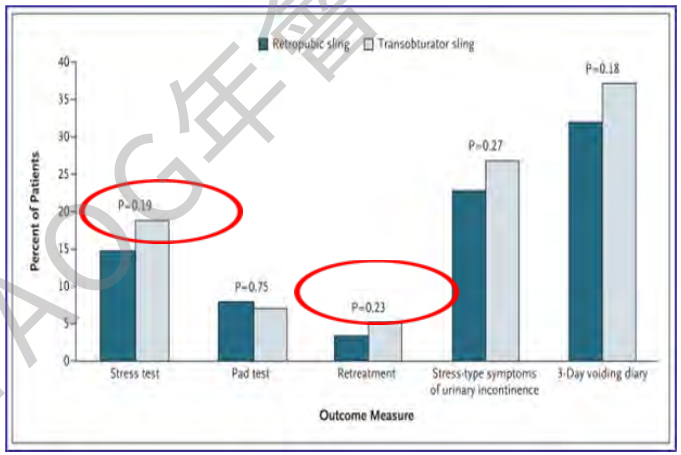
TOT is equally effective as TVT

TOT approach was associated with a decreased risk of complications

Retropubic versus transobturator mid-urethral slings for stress incontinence

N Engl J Med. 2010 Jun 3;362(22):2066-76. Epub 2010 May 17





The balance between cure rate and complications

1. on the short term in favor of TOT

2. on the long term similar for TOT and retropubic TVT

Houwert RM Am J Obstet Gynecol. 2010 Jan

Complications rate of conventional MUS

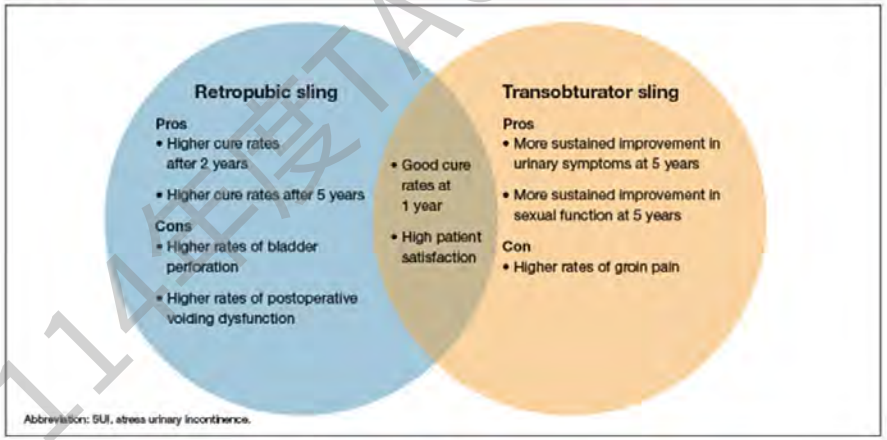
- 4.3% to 75.1% for retropubic : serious, higher occurrence.

928 MEDLINE citations for sling and complications

- 10.5% to 31.3% for transobturator : groin pain.

J ,Urol. 2008 Nov

FIGURE 2 Pros and cons of the retropubic sling versus the transobturator sling for SUI[7-9]



Abbreviation: SUI, stress urinary incontinence.

Comparison of suprapubic versus transobturator surgical treatments of female stress urinary incontinence

Sun MJ *Taiwan J Obstet Gynecol . 2008 Jun;47(2):175-9*

Table 2. Effect of the suprapubic arc sling (SPARC) versus the transobturator suburethral tape (MONARC) procedures on the operative and postoperative complications in stress urinary incontinence treatment of female patients*

Complication	MONARC ($n=74$)	SPARC ($n=32$)	$p^{\dagger}$
Bladder perforation	0 (0)	0 (0)	-
Hemorrhage or hematoma	0 (0)	0 (0)	-
Postoperative urinary retention (residual urine, > 100 mL)	6 (8.1)	3 (9.4)	1.000
Voiding difficulty (OPD F/U at 3–6 months)	15 (20.3)	10 (31.3)	0.222
Voiding difficulty (telephone interview)	1 (1.4)	3 (9.4)	0.081
Fever (temperature, > 38°C)	0 (0)	1 (3.1)	0.302
Urinary infection	17 (23)	2 (6.3)	0.053
De novo urgency/frequency	2 (2.7)	8 (25.0)	0.001
De novo urgency/frequency (OPD F/U)	6 (8.1)	4 (12.5)	0.485
De novo urgency/frequency (telephone interview)	1 (1.4)	3 (9.7)	0.081
Vaginal or urethral erosion	0 (0)	0 (0)	-

*Data are presented as n (%); †Chi-squared test or Fisher's exact test. OPD F/U = outpatient department follow-up.

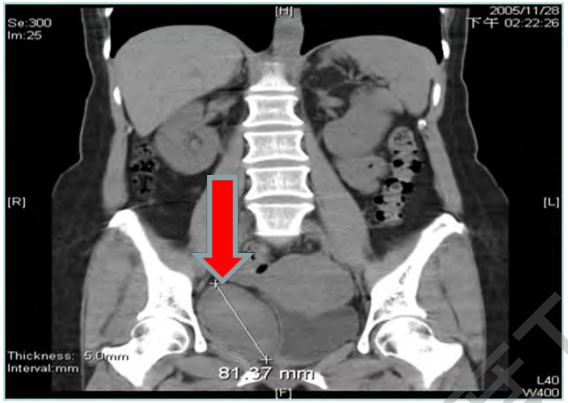
Table 4. Effect of the suprapubic arc sling (SPARC) versus the transobturator suburethral tape (MONARC) procedures on the objective and subjective surgical outcomes in stress urinary incontinence treatment of female patients*

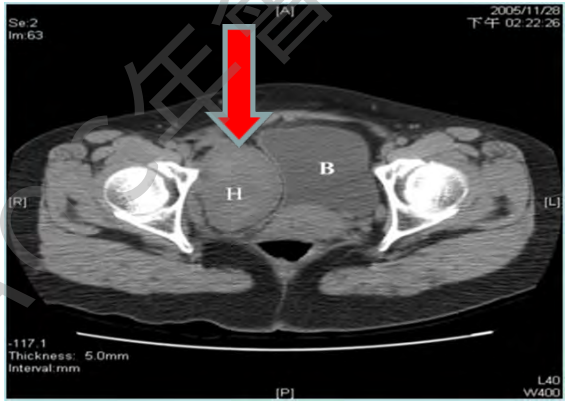
	MONARC ($n=74$)	SPARC ($n=32$)	$p^{\dagger}$
Objective			
Cured	58 (80.60)	29 (90.60)	0.258
Subjective			
Cured	72 (97.30)	24 (77.40)	<0.05
Improved	1 (1.35)	7 (22.60)	
Failed	1 (1.35)	0 (0)	

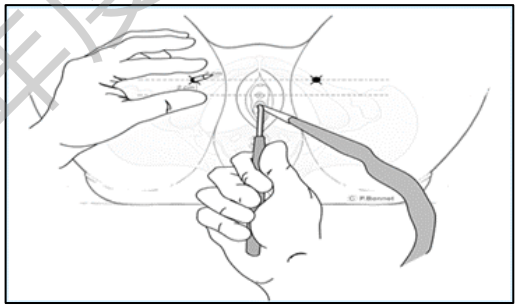
- **objective cure rate** at 3 months postoperatively (**90.6% vs. 80.6%; p = 0.258**)
- **subjective cure** rates of the **SPARC** and **MONARC** groups (**77.4% vs. 97.3%; p < 0.05**)

Obturator hematoma after the transobturator suburethral tape procedure (TVT-O)

SUN MJ ,*Obstet Gynecol. 2006 Sep;108(3 Pt 2):716-8*

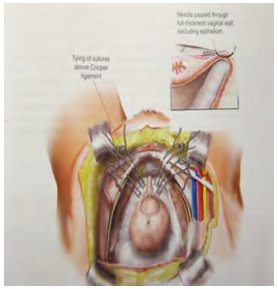






Evolved surgical management of female SUI

- Surgical treatment of SUI has **changed radically New and less invasive** methods recently introduced
- To optimize **efficacy** and overcome the **complications** and morbidity of standard therapies of SUI



1961,Burch

1970,needle suspension

Conventional slings (MUS)

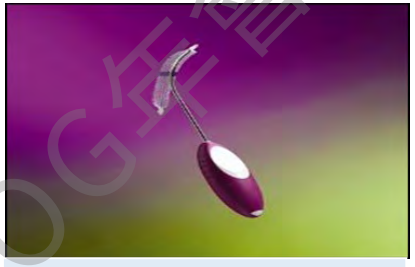
Old tranditional standard

New "gold- standard" surgery for SUI

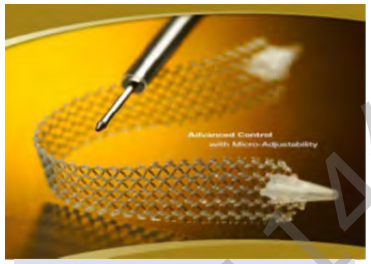
Single Incision Sling (SIS)　Mini sling

Third generation, **2006**

TVT SECUR(J&J)



MiniArc(AMS)



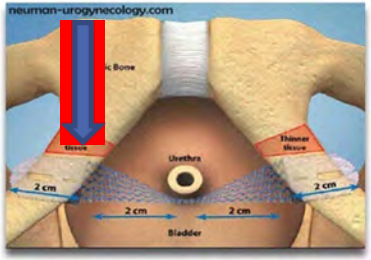
Solyx(Bonston)

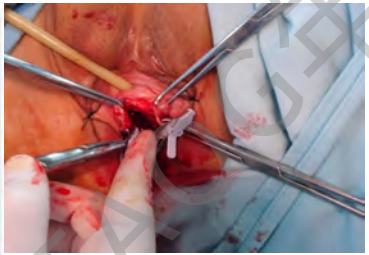
Ophira (promedon)

I-stop mini(CL Medical)

TVT- SECUR SYSTEM

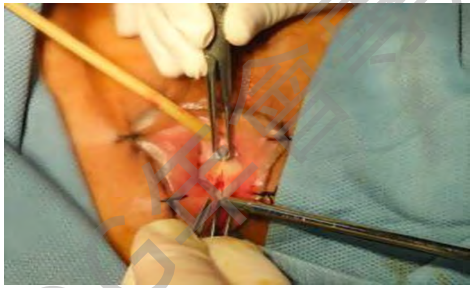
first single incision sling (SIS),mini sling

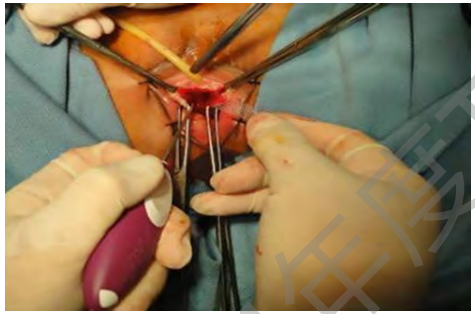


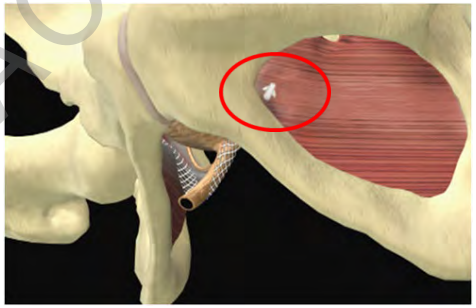


- Poor fixation mechanism (anchored) designed to endopelvic fascia behind the pubic bone
- Outcome of TVT-Secur is inferior to standard mid-urethral slings and has already been withdrawn from clinical use after 7 years on the market

Single incision sling- MiniArc (AMS 2007)

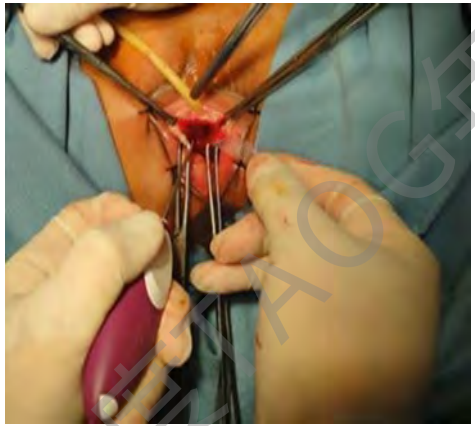






- permanent **self-fixating** tips
- **better anchoring** in the obturator internus muscle

Single incision sling- MiniArc

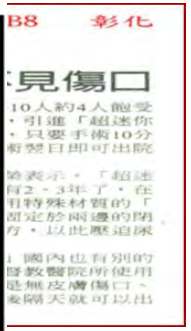


Dr. Ajay Rane

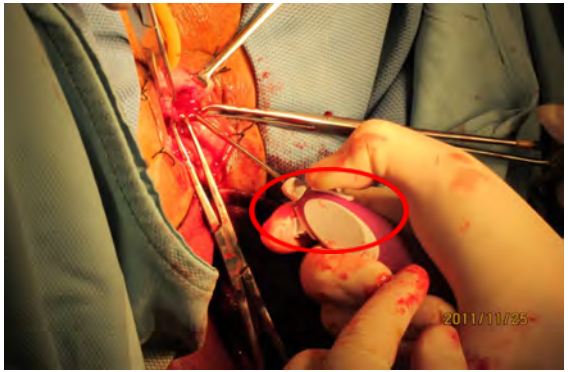
7/28/2009

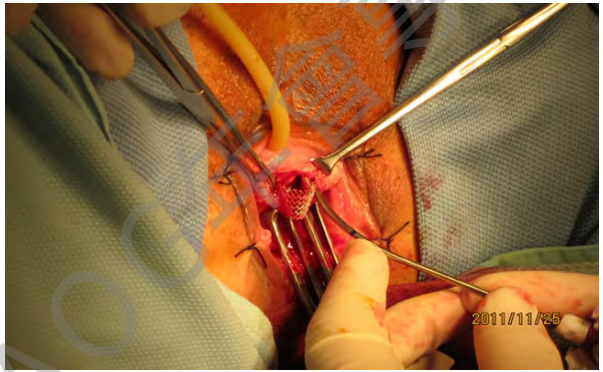
2010.11.06. Dr. Rane 來院手術示範

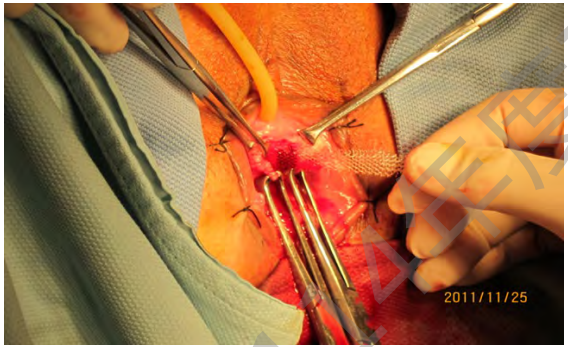
超迷你式尿失禁手術 (Miniarc) in CCH 12/18/2009

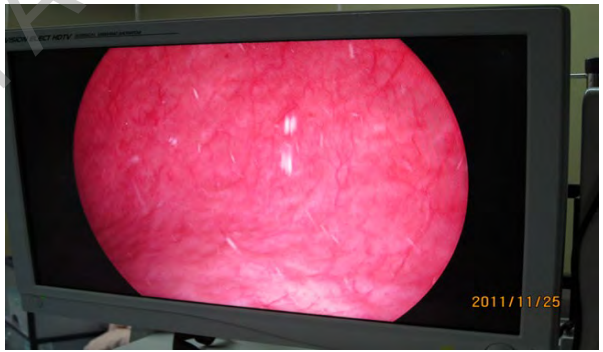


MiniArc precise system (AMS 2011)









彰基發表亞洲首篇迷你式尿失禁手術研究論文

Sun mj *Int Urogynecol J . 2013 May;24(5):823-9*

Int Urogynecol J
DOI 10.1007/s00192-012-1942-5

ORIGINAL ARTICLE

A comparative study of a single-incision sling and a transobturator sling: clinical efficacy and urodynamic changes

Mou-Jong Sun · Ryan Sun · Yi-Ing Li

- 成功率>8成
- 手術時間短
- 手術出血量極少
- 術後疼痛極輕
- 滿意度極高

101.11.21 民眾日報 27版 醫藥

沿路走 沿路漏

超迷型手術 將造福更多尿失禁患者

臺灣尿失禁手術歷程 感謝盧佳序理事長 整理提供

- VVF 1883 James Marion Sims
- MMK 1949 Marshall Marchetti Krantz
- Kelly 1913 Howard A Kelly
- Needle 1959 Armand Pereyra
- Rectus fascial sling 1942 Aldridge
- Burch 1961 John Christopher Burch
- Kegel 1948 Arnold Henry Kegel
- EBNS 1973 Thomas Stamey
- Vaginal wall patch 1981 Shlomo Raz
- L' Burch 1991 Vancaillie & Schuessler
- TVT 1995 Ulf Ulmsten
- SPARC 2001
- TVT-A 2001
- TOT 2001 Emmanuel Delorme
- Monarc 2003
- TVT-O 2004 De Leval
- TVT-secure 2005
- Minirc 2006
- Ajust 2010
- Align 2013
- Solyx 2013
- Obtryx 2013
- Needleless
- Kim 2014

J Reprod Med. 1996 Jul;41(7):529-33.

Burch colposuspension vs. Stamey bladder neck suspension. A comparison with special emphasis on detrusor instability and voiding dysfunction.

Wang AC[1].

Stamey vs. Burch

王誠 1996 503 12.1% VoidF

Int Urogynecol J Pelvic Floor Dysfunct. 1997;8(3):164-7.

Endourologic diagnosis and treatment of ureterouterine fistula.

Wang AC[1], Hung CF.

UUF

王誠 1997

Int Surg. 1998 Jul-Sep;83(3):262-4.

Extraperitoneoscopic colposuspension using CO2 distension method.

Lee CL[1], Yen CF, Wang CJ, Huang KG, Soong YK.

L'Burch

李奇龍 1998 48

J Urol. 1999 Dec;162(6):2073-7.

Is modified in situ vaginal wall sling operation the treatment of choice for recurrent genuine stress incontinence?

Su TH[1], Huang JP, Wang YL, Yang JM, Wei HJ, Huang CL.

Vaginal wall

蘇聰賢 1999 23 34%

Chang Gung Med J. 2002 Jun;25(6):360-6.

Tension-free vaginal tape versus laparoscopic bladder neck suspension for stress urinary incontinence.

Liang CC[1], Soong YK.

L'Burch vs. TVT

梁景忠 2002 22 vs 23 86% vs 86%

Int Urogynecol J Pelvic Floor Dysfunct. 2008 Jul;19(7):949-54. doi: 10.1007/s00192-008-0569-z. Epub 2008 Jan 30.

Outcomes of autologous fascial slingplasty procedure for treating female urinary incontinence.

Tsui KP[1], Ng SC, Yeh GP, Hsieh PC, Lin LY, Chen GD.

Fascial sling

陳進典 2008 84 94%

J Reprod Med. 1998 May;43(5):429-34.

Tension-free vaginal tape. A minimally invasive solution to stress urinary incontinence in women.

Wang AC[1], Lo TS.

TVT

王誠 1998 83 83%

BJU Int. 2001 Dec;88(9):884-8.

The surgical results of the pubovaginal sling procedure using polypropylene mesh for stress urinary incontinence.

Kuo HC[1].

Pubovaginal sling

郭漢崇 2001 52 81%

J Am Assoc Gynecol Laparosc. 2002 Nov;9(4):500-2.

Trocar-assisted sling suspension for stress urinary incontinence.

Lee CL[1], Yen CF, Wang CJ, Yuen LT, Lee PS, Soong YK.

TASS

李奇龍 2002 24 90%

Int Urogynecol J Pelvic Floor Dysfunct. 2005 May-Jun;16(3):230-5. Epub 2004 Oct 27.

Randomized comparison of the suprapubic arc sling procedure vs tension-free vaginal taping for stress incontinent women.

Tseng LH[1], Wang AC, Lin YH, Li SJ, Ko YJ.

SPARC vs. TVT

曾令鴻 2005 62 80.7% vs

J Urol. 2008 Jun;175(6):2186-9; discussion 2189-200.

Treatment for unsuccessful tension-free vaginal tape operation by shortening pre-implanted tape.

Lo TS[1], Wang AC, Liang CC, Long CY, Lee SJ.

TVT-shorten

盧佳序 2006 14 71%

Tension-free vaginal tape-obturator procedure for treatment of severe urodynamic stress incontinence: subjective and objective outcomes during 2 years of follow-up.

Su TH[1], Huang WC, Lee MY, Lin TY, Chang HC, Chen CP.

TVT-O

蘇聰賢 2009 67 76%

Int Urogynecol J. 2013 May;24(5):823-9. doi: 10.1007/s00192-012-1942-5. Epub 2012 Sep 28.

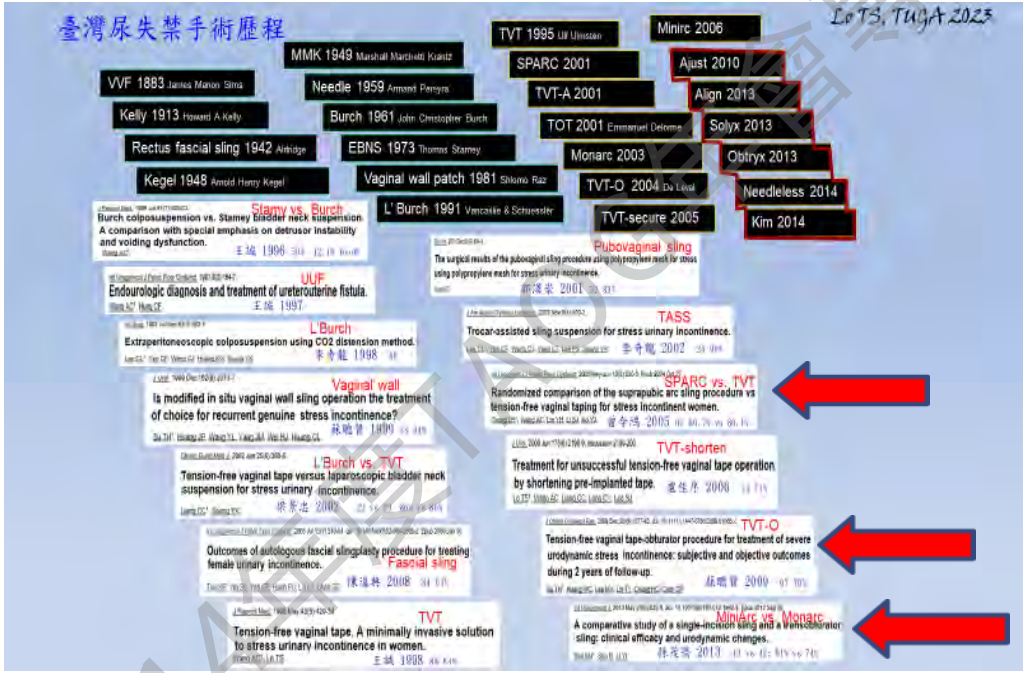
A comparative study of a single-incision sling and a transobturator sling: clinical efficacy and urodynamic changes.

Sun MJ[1], Sun R, Li YI.

MiniArc vs. Monarc

孫茂榮 2013 43 vs 42; 81% vs 74%

MUS in Taiwan



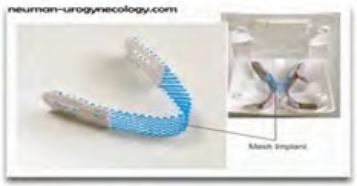
盧佳序理事長 整理提供

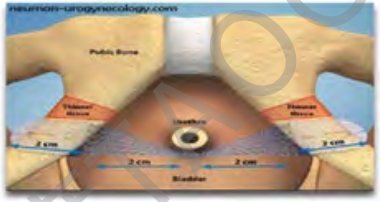
平均慢約5-7年

SIS operations for urinary incontinence in women

Cochrane Database Syst Rev , 2017 Jul 26

- Identified **31** trials involving 3290 women.
- **TVT-Secur** is **inferior** to standard mid-urethral slings.





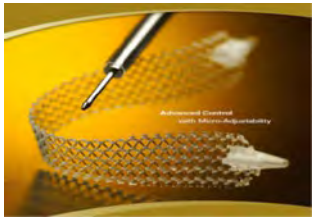
- Not enough evidence has been found on other SIS compared with conventional mid-urethral slings to allow reliable comparisons.

SIS operations for urinary incontinence in women

Cochrane Database Syst Rev . 2017 Jul 26

- Additional adequately powered and high-quality trials with longer-term follow-up are required.
- Significant difference **in fixation mechanisms** may influence outcomes.
- Trials should clearly describe the fixation mechanism of these single-incisions slings






Prospective study of a single-incision sling versus a transobturator sling in women with stress urinary incontinence: 3-year results

Am J Obstet Gyneco. 2020 Mar 14 , Amanda B. White

- a prospective, nonrandomized, parallel cohort, multicenter post approval study.
- compare safety and efficacy of single-incision sling to transobturator sling at 36 months.
- Results :

	SIS	TO	P
treatment success	90.4%	88.9%	0.93
mesh-related complications	2.8%	5.0%	0.38
urinary retention	2.8%	4.3%	0.54

Key Findings:
The efficacy and safety of single-incision sling are **non-inferior** to transobturator sling for the **long-term** treatment of female SUI.

Recent studies on Single Insion Sling

- Mini-Slings: Do They Stand the Test of Time? A 10-Year Cohort *Urol Int. 2021;105(1-2):*

  confirming that MiniArc®, can cure or improve SUI and give patients high satisfaction rates, at the expense of low morbidity

- Prospective study of a single-incision sling versus a transobturator sling in women with stress urinary incontinence: 3-year results *Am J Obstet Gynecol. 2020 Oct;223(4):545.e1-545.e*

  Single-incision sling(SOLYX) was not inferior to transobturator sling

- Comparison of Two Single-Incision Mini-Slings for the Treatment of Incontinence *Med Princ Pract . 2021;30(1):85-91*

  83.1(Ophira) and 79.2%(Gallini) had similar efficacy, complication rates, and scores in QoL questionnaires.

Comparison of Clinical Efficacy and Urodynamic Changes Using Single-incision Slings (MiniArc® vs. Solyx™) for the Treatment of Female Stress Urinary Incontinence

Fook Chin Chiang, Mou-Jong Sun

Gynecology and Minimally Invasive Therapy 10 (2021) 235-242

Gynecology and Minimally Invasive Therapy 10 (2021) 235-242

Original Article

Comparison of Clinical Efficacy and Urodynamic Changes Using Single-incision Slings (MiniArc® vs. Solyx™) for the Treatment of Female Stress Urinary Incontinence

Fook Chin Chiang[1,2], Ryan Sun[3], Yu-Jun Chang[4], Yi-Ing Li[5], Mou-Jong Sun[1,5]*

[1]Department of Obstetrics and Gynecology, Division of Urogynecology and Reconstructive Pelvic Surgery, Changhua Christian Hospital, Changhua, [2]Department of Obstetrics and Gynecology, Cheng Ching Hospital, Taichung, Taiwan, [3]Department of Surgery, Section of Urology, University of Manitoba, Winnipeg, Canada, [4]Epidemiology and Biostatistics Center, Changhua Christian Hospital, [5]Center for Urinary Incontinence and Voiding Dysfunction, Changhua Christian Hospital, Changhua, Taiwan

Objective cure rate :

92.2% negative cough ST at 3 months after surgery compared to 81% observed in the MiniArc group, P = 0.079.

Subjective cure rates:

93.7% vs. 90.2% at 3-months (P = 0.513)

89.9% vs. 80.4% at 1 year for Solyx and MiniArc patients, respectively (P = 0.126)

The Solyx SIS demonstrated **superiority** over the MiniArc in this study based on its higher objective cure rate and lower risk for surgical failure.

Incidences and risk factors of postoperative urinary retention (POUR)after mid-urethral sling placement with and without pelvic reconstructive surgery


Taiwanese Journal of Obstetrics & Gynecology

Original Article

Incidences and risk factors of postoperative urinary retention after mid-urethral sling placement with and without pelvic reconstructive surgery

Mou-Jong Sun, Ryan Sun, Yu-Jun Chang, Li-Ju Chen, Zhu Wei Lin

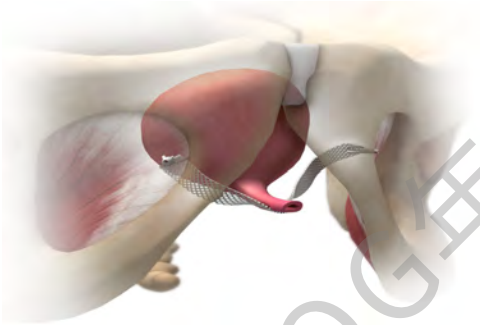
Sun mj *TJOG Volume 64, Issue 2, March 2025, Pages 287-29*

Table 4. Comparison of the correlation between the surgical cure rates of slings in POUR

Post operation		Total		POUR						P-value
				No		Transient		Prolonged		
		N	%	N	%	N	%	N	%	
Stress test	Negative (No SUI)	642	**91.7**	509	90.9	123	96.9	10	76.9	0.013*
	Positive	58	8.3	51	9.1	4	3.1	3	23.1	
Leakage due to physical activity	No urine leakage	627	**91.4**	499	90.7	119	96.0	9	75.0	0.096
	Not disturbed	49	7.1	42	7.6	4	3.2	3	25.0	
	Slightly disturbed.	5	0.7	4	0.7	1	0.8	0	0.0	
	Moderately disturbed	5	0.7	5	0.9	0	0.0	0	0.0	

SUI: Stress urinary incontinence
P-value by Chi-square test. * P-value < 0.05

Single Insion Sling , Mini sling



less invasive ? better Safe& outcomes

Complications

Efficacy

A Life-Threatening Hematoma After the Single-Incision Sling MiniArc Procedure: A Case Report

ELSEVIER

JMIG The Journal of Minimally Invasive Gynecology

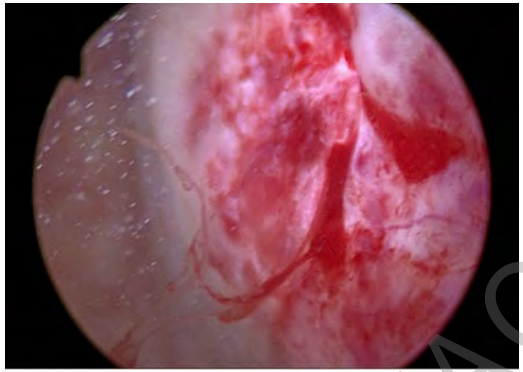
Case Report

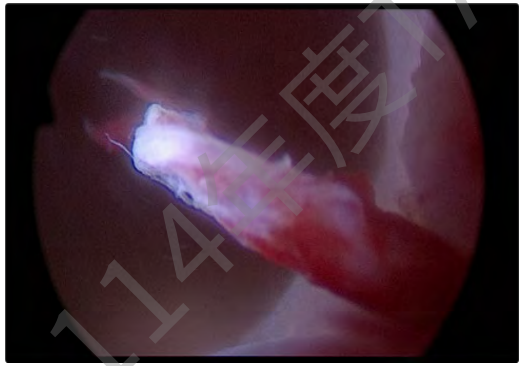
A Life-Threatening Hematoma After the Single-Incision Sling MiniArc Procedure: A Case Report

Mou-Jong Sun, MD*

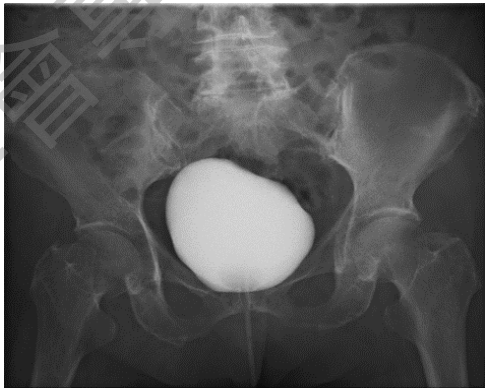
Sun MJ *Journal of Minimally Invasive Gynecology (2013) 20, 529–532*

Intraoperative Bladder injury at the Time of SIS Placement in CCH

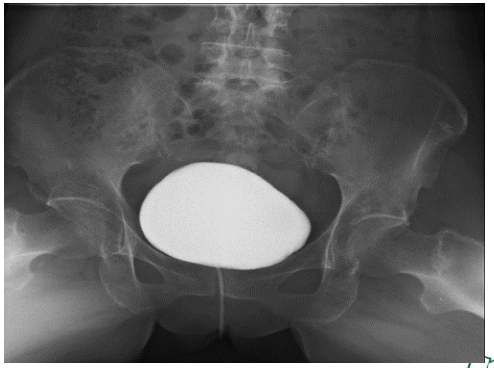




2month



1 month



Risk factors of bladder injury in MUS

1. **Surgical technique :** Sling type / surgical route	➢ Retropubic sling type: **No 1** ○ Top-to-bottom route > bottom-to-top route ➢ Transobturator ○ Outside-in and Inside-out are similar
2. **Surgeon-related**	➢ Experience
3. **Previous pelvic surgery** ➔ colposuspension ➔ prior operations using TVT or TOT slings	➢ Anatomical challenges ○ Tissue scarring **(Case 1 brachytherapy)** ■ Radiation?
4. **Patient-specific factors** ➔ **BMI< 25 kg/m (TVT)** **(Case 2: BMI:22.6)**	➢ Old age ➢ Heavy weight ➢ Lower BMI

The efficacy and complications of using transvaginal mesh to treat pelvic organ prolapse in Taiwan: A 10-year review

Mou-Jong Sun, Yu-Li Chuang, Hui-Hsuan Lau , Tsia-Shu Lo , Tsung-Hsien Su

Taiwan J Obstet Gynecol . 2021 Mar;60(2):187-192




Taiwanese Journal of Obstetrics & Gynecology 60 (2021) 187–192

Contents lists available at ScienceDirect

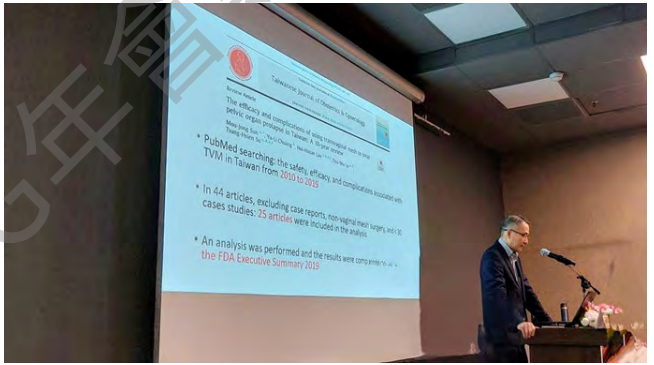
Taiwanese Journal of Obstetrics & Gynecology

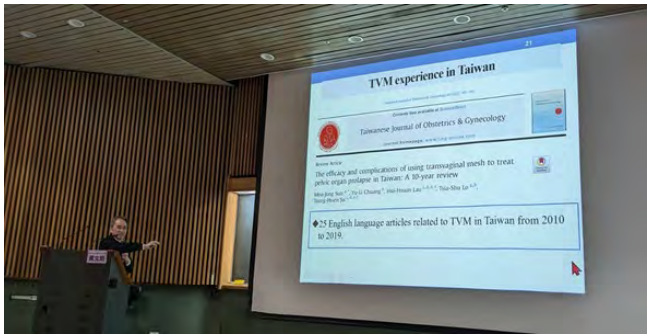
journal homepage: www.tjog-online.com

Review Article

The efficacy and complications of using transvaginal mesh to treat pelvic organ prolapse in Taiwan: A 10-year review

Mou-Jong Sun [a, *], Yu-Li Chuang [b], Hui-Hsuan Lau [c, d, e, f], Tsia-Shu Lo [g, h], Tsung-Hsien Su [c, d, e, f]





Outcomes of MUS surgeries for SUI among Taiwanese women

Lo TS, Kamarudin M, Sun MJ, Su TH

Taiwanese Journal of Obstetrics & Gynecology 63 (2024) 826-835

Taiwanese Journal of Obstetrics & Gynecology 63 (2024) 826–835

Contents lists available at ScienceDirect

Taiwanese Journal of Obstetrics & Gynecology

journal homepage: www.tjog-online.com

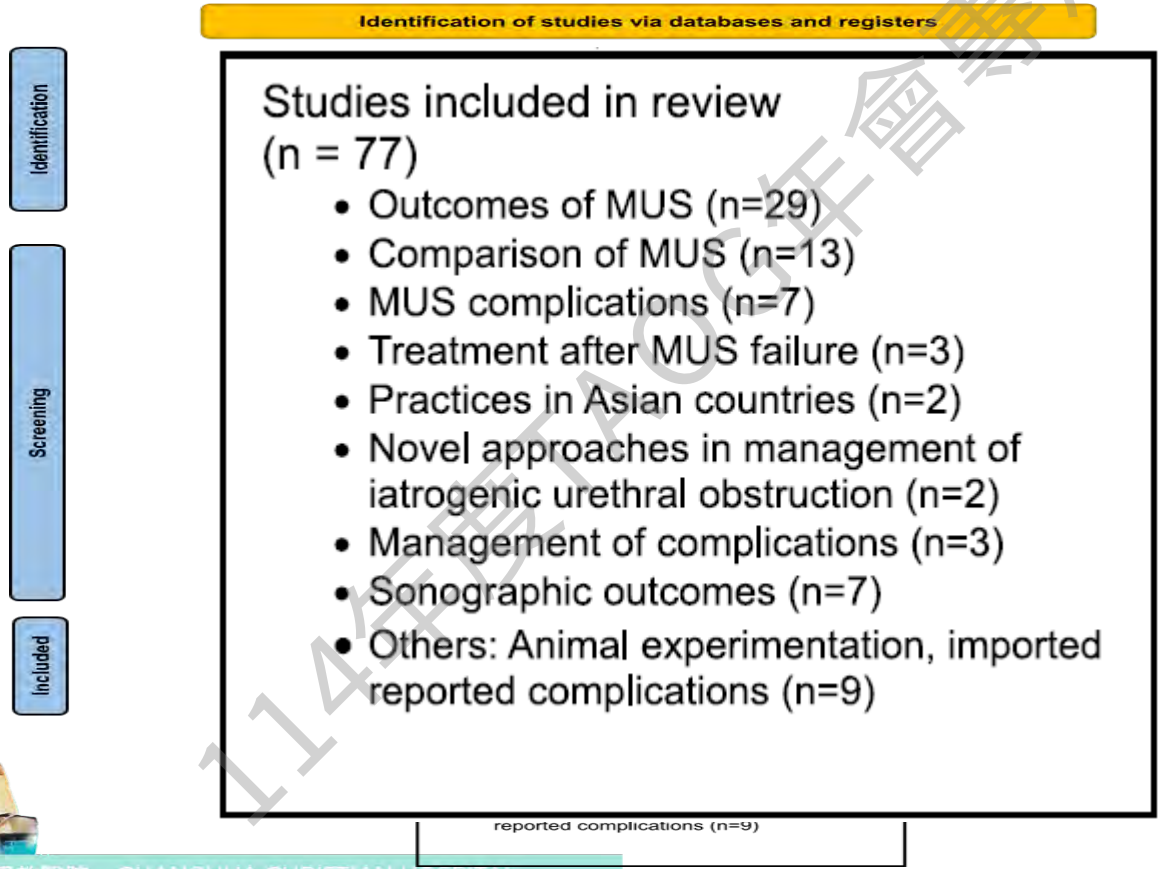
Review Article

Predictors and outcomes of Mid-urethral sling continence surgeries for stress urinary incontinence among Taiwanese women: What works best?

Tsia-Shu Lo [a, b, c, e, *, 1], Maherah Kamarudin [d, e, 1], Mou-Jong Sun [f, g], Tsung-Hsien Su [h, i]

[a] Division of Urogynecology, Department of Obstetrics and Gynecology, Linkou, Chang Gung Memorial Hospital, Linkou Medical Center, Taoyuan, Taiwan
[b] Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital, Keelung Medical Center, Keelung, Taiwan
[c] Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital, Taipei, Medical Center, Taipei, Taiwan
[d] Department of Obstetrics & Gynecology, Faculty of Medicine, Universiti Malaya, Jalan Profesor Diraja Ungku Aziz, Kuala Lumpur, 50603, Malaysia
[e] Chang Gung University, School of Medicine, Taoyuan, Taiwan
[f] Division of Urogynecology and Reconstructive Pelvic Surgery, Department of Obstetrics and Gynecology, Changhua Christian Hospital, Changhua, Taiwan
[g] General Education Center, Chien Kuo Technology University, Changhua, Taiwan
[h] Division of Urogynecology, Department of Obstetrics and Gynecology, Mackay Memorial Hospital, Taipei, Taiwan
[i] Department of Medicine, Mackay Medical College, New Taipei City, Taiwan

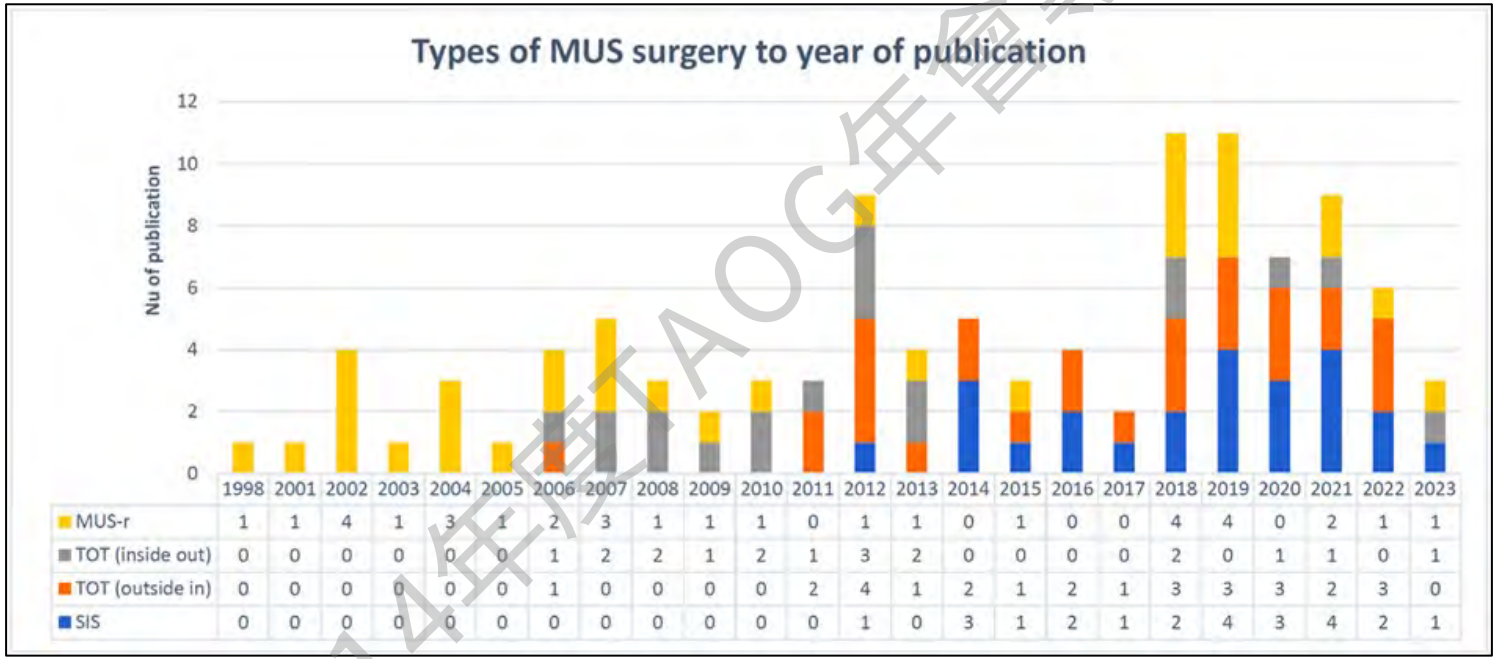
PRISMA flow diagram



Outcomes of MUS surgeries for SUI among Taiwanese women

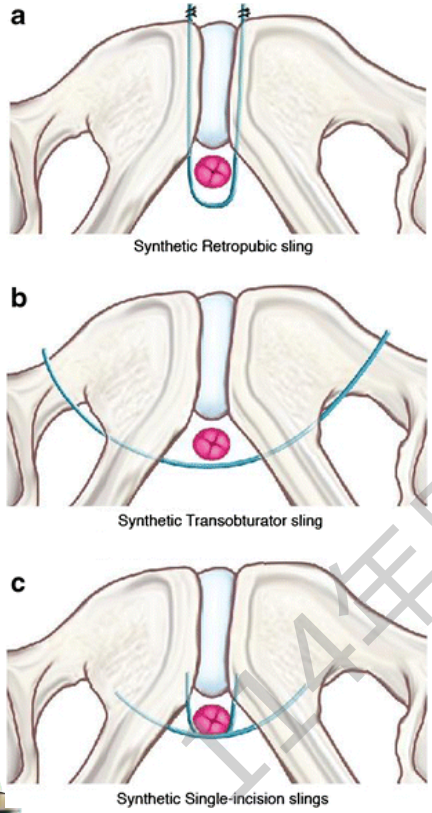
- reviewed **77** articles
- searched using PubMed platform related to MUS in USI among Taiwanese women from **1998** **to** **2023**
- articles, total **2733** participants with at **least** **12 months follow up after MUS**

Bar Chart Correlation between Types of Surgery and Year of Study Published



	1998	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
MUS-r	1	1	4	1	3	1	2	3	1	1	1	0	1	1	0	1	0	0	4	4	0	2	1	1
TOT (inside out)	0	0	0	0	0	0	1	2	2	1	2	1	3	2	0	0	0	0	2	0	1	1	0	1
TOT (outside in)	0	0	0	0	0	0	1	0	0	0	0	2	4	1	2	1	2	1	3	3	3	2	3	0
SIS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	1	2	1	2	4	3	4	2	1

Objective and subjective cure rate of MUS



Retropubic sling (TVT, tension vaginal tape)

Obj 88%-94%

Subj 87%-92.5%

Trans-obturator tape (TOT)

Obj 80%-92%

Subj 60%-90%

Single incision sling (SIS)

Solyx： Obj 87%-90%
Subj 86%

MiniArc: Obj 87%-91%
Subj 90%

Complications of each type of MUS

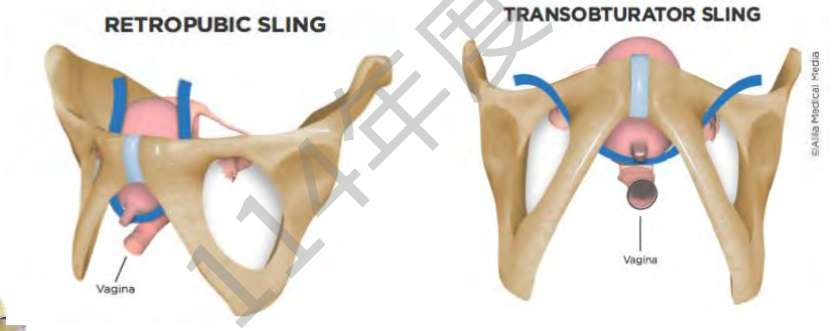
Table 3
Complications associated with types of mid urethral slings surgery.

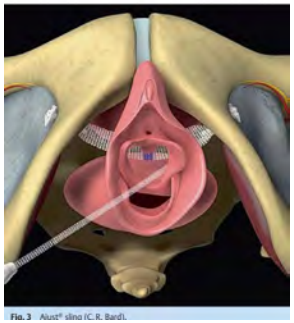
Types of MUS	MUS-r		TOT (inside out)	TOT (outside in)		SIS			
Complication (%)	TVT	SPARC	TVT-O	(Monarc)	(Obtryx)	Solyx	MiniArc	Ajust	I stop Mini
Major complication									
Bladder Injury	0.3–3.8	3.4–12.9	0.2–0.7						
Hematoma	1.9–16.1	3.4–9.7	1.4						
Vaginal Injury	5.7		2.2–0.9	12.9					
Minor complication									
Tape Extrusion	0.7–12.9	3.2	1.5–8.1	1.4–2.2	2.9				
Urinary Retention	9.0–10.0	9.4	2.9	4.4–8.1		6.7	3.7	3.3	
UTI	6.0–15.1	6.3	4.8–17.2	1.4–23.0	5.7–13	3.3	4.5–5.5	3.3	11.1
Voiding Dysfunction	13.2–18	31–40.7	2.2–12.9	5.8–21.7			1.8		
Dyspareunia	5.2		8.1	2.9					1.4
Groin Pain	3.3–4.4		0.5–2.4	4.3–12.9	1.4–20.3				18.1
Denovo Urgency	5.6–8.6	10.3–47.2	1.1–5.9	9.7–13.1	40.9		4.7–11.1		27.8
Frequency	9.7	16.1–24.1		7.3–12.9			3.7		

Complication presented in (%) of incidence.
MUS, mid-urethral sling; **SIS**, Single incision sling; **TOT** transobturator tape; **MUS-r**, midurethral sling retropubic, **TVT**- Tension free vaginal sling; **SPARC**, Suprapubic arc sling; **TVT-O** Tension free vaginal sling obturator; **UTI**, urinary tract infection.

Which MUS works best ?

- Still lack of data on head to-head comparison.
- **All MUS** deliver comparable **good outcome** in terms of efficacy and cure rate.
- Each carries its own benefit and risk.
- **TVT** has longest data and proven beneficial for **repeat MUS** or with **concomitant PRS** however had **highest complication rate** compared to TOT and mini-slings





Mid-urethral synthetic slings for female stress urinary incontinence with ISD

TABLE 2 Comparison of retropubic and transobturator slings in patients with ISD

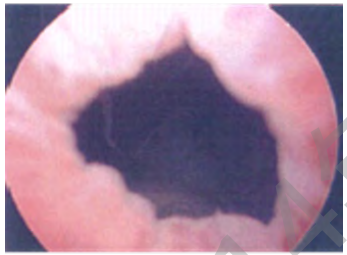
Reference	*N*	Cure rates, %		Comments
		TVT	TOT	
Jean *et al.* [60]	253	87	35	Pubovaginal sling 87
Miller *et al.* [61]	145	97	84	
Schierlitz *et al.* [31]	164	79	55	Nine in TOT require repeat surgery for SUI
Araco *et al.* [62]	201 (not all ISD)	100	66	
Constantini *et al.* [57]	145*	72	68	Small numbers with ISD
Gungorduk *et al.* [63]	300	78.3	52.1	

*50 < 60 cmH_2O; TOT only combined results of ISD and urethral hypermobility.

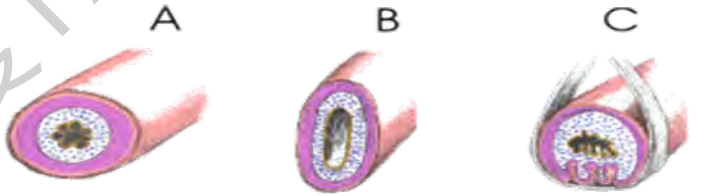
BJUI **Eva D.M. 2010**

The study comparing slings in woman with intrinsic sphincter Deficiency (ISD)

- The long-term cure rates : TVT >TOT *Obstet Gynecol. 2012*
- Retropubic TVT is a more effective operation than the transobturator tape. *Obstet Gynecol. 2008*
- Whether Retropubic TVT more effective in women than transobturator slings is under investigation. *UpToDate 2018*
- Suggest that these women be treated in the same manner as other women with SUI . *UpToDate 2018*



Bladder neck Incompetence



Selection of Treatment modality for SUI by Urodynamics

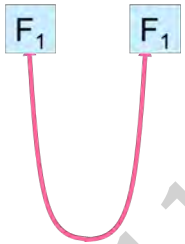
low VLPP<60 cmH2O, MUCP<20cmH2O

Intrinsic Sphincter Deficiency(type III SUI)

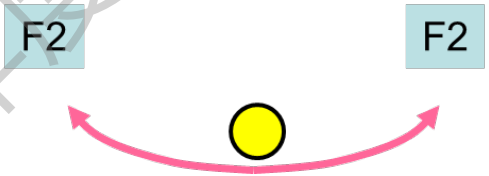
??

??

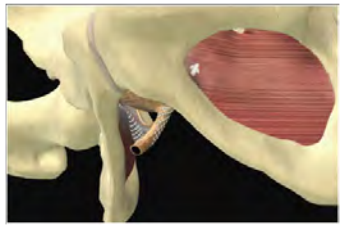
Retropubic Slings (“U” shaped)



Obturator Slings (Hammock Shaped)



Single incision sling system(SIS)



STILL CONTROVERSIAL

Is transobturator suburethral sling effective for treating female urodynamic stress incontinence with low maximal urethral closure pressure?

Sun MJ Taiwanese Journal of Obstetrics & Gynecology 50 (2011) 20-24

Table 3
Objective surgical outcome of MONARC based on stress test and 1-hour pad test at 6-month postoperation

Surgical outcome	MUCP < 30 cmH_2O ($n = 17$)	MUCP > 30 cmH_2O ($n = 56$)	Total ($n = 73$)	p
Cure rate, n(%)	14 (82.4)	45 (80.4)	59 (80.8)	1.000
Cure—negative stress test and dry pad test				
Pad test				
Preoperative (g)	39.0 ± 35.0	22.1 ± 38.5	25.9 ± 38.2	0.043
Postoperative (g)	0.9 ± 3.2	2.0 ± 6.2	1.7 ± 5.7	
Change (g)	38.0 ± 33.3	20.1 ± 38.0	24.1 ± 37.5	

MUCP = maximal urethral closure pressure.

Transobturator suburethral sling is a safe and highly effective treatment for stress urinary incontinence even in women with low MUCP at a mean follow-up of 48 months.

Is single incision midurethral sling effective in patients with low maximal urethral closure pressure?

Sun MJ *Taiwanese Journal of Obstetrics & Gynecology 55 (2016) 20-26*

Table 3
Comparison of the objective and subjective outcomes preoperation (preop) at 3 months and 18.4 months postoperation (postop).

	MUCP ≥ 40 cmH_2O				MUCP < 40 cmH_2O			
	Preop $n = 88$	3 mo postop $n = 88$	18.4 mo postop $n = 88$	p^*	Preop $n = 24$	3 mo postop $n = 24$	18.4 mo postop $n = 24$	p^*
1- hour pad test (g)	20.6 ± 17.6	0.7 ± 2.3 ($n = 60$)	–	<0.001	20.5 ± 16.7	0.9 ± 2.1 ($n = 18$)	–	<0.001
Objective cure rate		91.8% ($n = 60$)	–			88.9% ($n = 18$)	–	
UDI-6 Q3 answer is *no*	0%	88.50%	81.60%	<0.001	0%	83.30%	79.20%	<0.001
IIQ-7 (mean ± SD)	56.5 ± 25.7	2.6 ± 6.9	3.8 ± 8.6	<0.001	64.4 ± 17.2	5.8 ± 16.4	2.7 ± 6.6	<0.001
UDI-6 (mean ± SD)	42.6 ± 18.3	5.2 ± 8.5	5.9 ± 4.1	<0.001	47.2 ± 21.3	5.2 ± 8.2	4.3 ± 8.2	<0.001
PISQ (mean ± SD)	35.6 ± 5.8 ($n = 63$)	39.1 ± 3.3 ($n = 22$)	39.1 ± 2.0 ($n = 46$)	<0.001	34.5 ± 6.1 ($n = 10$)	38.0 ± 3.5 ($n = 3$)	38.8 ± 2.7 ($n = 5$)	0.068

No significant differences between the objective and subjective outcomes between the two groups ($p > 0.05$). *Intragroup analysis of preoperatively vs. 3 months and 1 year postoperatively.

SIS is a safe and highly effective treatment for urodynamic stress incontinence even in women with low MUCP at a mean follow-up of 18.4 months

Efficacy of the new adjustable I-stop-mini sling system in women with stress urinary incontinence and intrinsic sphincter deficiency: A retrospective cohort study

*International Journal of Gynecology & ObstetricsVolume 160, Issue 1 p. 263-270 **(2022)**北榮*

- A total of **141** women who underwent placement of an I-stop-mini or Obtryx and were followed up for at least 1 year were enrolled.
- The subjective cure rate, objective success, and adverse event rate did **not** differ in the two devices.
- I-stop-mini had a significantly shorter operative time

Incidences and risk factors of postoperative urinary retention (POUR)after mid-urethral sling placement with and without pelvic reconstructive surgery

Sun mj *TJOG Volume 64, Issue 2, March 2025, Pages 287-29*

Taiwanese Journal of Obstetrics & Gynecology 64 (2025) 287–292

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Original Article

Incidences and risk factors of postoperative urinary retention after mid-urethral sling placement with and without pelvic reconstructive surgery

Mou-Jong Sun [a, b, *], Ryan Sun [c], Yu-Jun Chang [d], Li-Ju Chen [b], Zhu Wei Lim [a]

[a] Department of Obstetrics and Gynecology, Division of Urogynecology and Reconstructive Pelvic Surgery, Changhua Christian Hospital, Changhua, Taiwan
[b] Center for Urinary Incontinence and Voiding Dysfunction, Changhua Christian Hospital, Changhua, Taiwan
[c] Department of Urology, Stanford University, California, USA
[d] Epidemiology and Biostatistics Center, Changhua Christian Hospital, Taiwan

Incidences and risk factors of postoperative urinary retention (POUR)after mid-urethral sling placement with and without pelvic reconstructive surgery

Table 1. Patients' demographics and characteristics *Sun MJ Taiwanese Journal of Obstetrics & Gynecology2025*

	Total (n=866)		POUR						P-value		
			No (n=686) (79.2%)		Transient (n=158) (18.3%)		Prolonged (n=22) (2.5%)		Overall	No vs. T	No vs. P
Age (year, median (IQR))	61	(51-68)	60	(51-68)	64	(54-71)	64	(52-68)	0.013*	0.009*	0.688
Parity (median (IQR))	3	(2-4)	3	(2-4)	3	(2-4)	3	(3-4)	0.082	0.072	0.722
Body mass Index (kg/m^2, median (IQR))	24.8	(22.8-27.1)	24.8	(22.9-27.1)	24.3	(22.2-27)	25.9	(24.3-27.1)	0.388	0.169	0.338
Prior hysterectomy, n %	139	16.1%	97	14.1%	35	22.2%	7	31.8%	0.001*	0.012*	0.031*
Prior incontinence procedure, n %	16	1.8%	14	2.0%	2	1.3%	0	0.0%	0.362	0.749	0.499
Prior pelvic reconstruction surgery, n %	32	3.7%	21	3.1%	8	5.%1	3	13.6%	0.014*	0.213	0.035*
MAX (ml/sec, median (IQR))	18	(13-24)	18	(13-24)	17	(11-22)	19	(12-24)	0.134	0.072	0.776
AVG (ml/sec, median (IQR))	8	(6-11)	8	(6-11)	7	(5-10)	8	(5-11)	0.025*	0.018*	0.743
PVR (ml, median (IQR))	32	(13.5-72)	31	(12-71)	34	(18-87)	42	(20-84)	0.014*	0.022*	0.283
MUCP (cmH_2O, median (IQR))	51	(38-68)	51	(37-68)	53	(39-69)	52	(38-73)	0.529	0.538	0.842
MUCP < 30, n %	106	12.3%	84	12.4%	20	12.7%	2	9.1%	0.892	0.916	>0.999
Concomitant hysterectomy, n %	413	47.7%	341	49.7%	65	41.1%	7	31.8%	0.014*	0.052	0.098
Concomitant reconstruction surgery, n %	673	77.7%	531	77.4%	125	79.1%	17	77.3%	0.731	0.642	>0.999
Anti-incontinence sling alone, n %	193	22.3%	155	22.6%	33	20.9%	5	22.7%	0.731	0.642	>0.999

No patients with prolonged POUR required a Foley catheter > **2 weeks** after discharge

Abbr. Interquartile range represents the distance between the 25th percentile and 75th percentile; T: Transient POUR; P: Prolonged POUR
In the overall comparison, continuous variables were tested by Jonckheere-Terpstra test for trend, and categorical variables were tested by Chi-square test for trend; In the comparison of two groups, continuous variables were tested by Mann-Whitney U test, and categorical variables were tested by Chi-square test or Fisher's exact test when appropriated; * P-value＜0.05

Incidences and risk factors of postoperative urinary retention (POUR)after mid-urethral sling placement with and without pelvic reconstructive surgery

Sun MJ
TJOG Volume 64, Issue 2, March 2025, Pages 287-29

Table 3. Comparison of the correlation between the surgical methods of slings in POUR

			POUR							POUR				
			No		Transient		Prolonged		P-value	No		Yes		P-value
		Total	N	%	N	%	N	%		N	%	N	%	
Surgical method	**Sling alone**	193	155	80.3	33	17.1	5	2.6	0.896	155	80.3	38	19.7	0.670
	Sling+concomitant reconstruction surgery	673	531	78.9	125	18.6	17	2.5		531	78.9	142	21.1	
Slings	**TOT**	435	358	82.3	65	14.9	12	2.8	0.040*	358	82.3	77	17.7	0.025*
	SIS	431	328	76.1	93	21.6	10	2.3		328	76.1	103	23.9	

POUR: postoperative urinary retention; SIS: single incision sling; PRS: pelvic reconstructive surgery; TOT: transobturator sling. P-value by Chi-square test. * P-value < 0.05

Table 4. Comparison of the correlation between the surgical cure rates of slings in POUR

Post operation		Total		POUR						P-value
				No		Transient		Prolonged		
		N	%	N	%	N	%	N	%	
Stress test	Negative (No SUI)	642	**91.7**	509	**90.9**	123	**96.9**	10	**76.9**	**0.013***
	Positive	58	8.3	51	9.1	4	3.1	3	23.1	
Leakage due to physical activity	No urine leakage	627	**91.4**	499	**90.7**	119	**96.0**	9	**75.0**	**0.096**
	Not disturbed	49	7.1	42	7.6	4	3.2	3	25.0	
	Slightly disturbed.	5	0.7	4	0.7	1	0.8	0	0.0	
	Moderately disturbed	5	0.7	5	0.9	0	0.0	0	0.0	

SUI: Stress urinary incontinence
P-value by Chi-square test. * P-value < 0.05

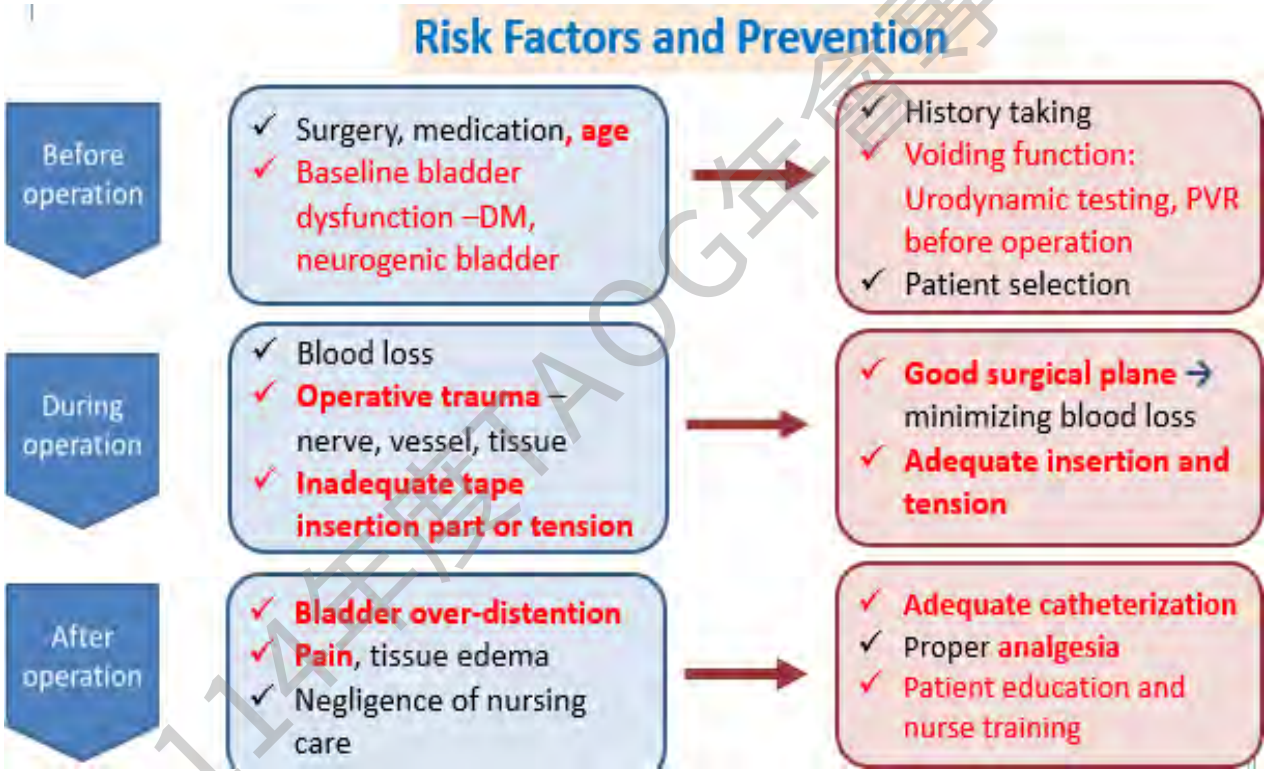
Table 5. Logistic regression analysis of POUR

			POUR		Univariate analysis (crude)			Multiple analysis (adjusted)#		
		Total	N	%	OR	95% C.I.	P-value	OR	95% C.I.	P-value
Age	<65	527	94	17.8	1.000			1.000		
	>=65	339	86	25.4	1.566	1.125 - 2.180	0.008*	1.577	1.111 - 2.238	0.011*
Prior hysterectomy	No	727	138	19.0	1.000			1.000		
	Yes	139	42	30.2	1.848	1.230 - 2.776	0.003*	1.887	1.241 - 2.869	0.003*
Enterocele	No	301	50	16.6	1.000			1.000		
	Yes	565	130	23.0	1.500	1.045 - 2.153	0.028*	1.542	1.057 - 2.249	0.025*
MUCP<30 cmH2O	No	790	157	19.9	1.000			1.000		
	Yes	72	23	31.9	1.892	1.119 - 3.200	0.017*	1.736	1.002 - 3.008	0.049*
Slings	TOT	435	77	17.7	1.000			1.000		
	SIS	431	103	23.9	1.460	1.048 - 2.033	0.025*	1.619	1.138 - 2.302	0.007*
Immediate post-op complications	No	839	168	20.0	1.000			1.000		
	Yes	27	12	44.4	3.195	1.468 - 6.954	0.003*	3.605	1.615 - 8.046	0.002*

OR: Odds ratio; * P-value < 0.05

#: Adjusted for age, prior hysterectomy, enterocele, USI type III, slings, and immediate post-op complications.

Incidences and risk factors of postoperative urinary retention (POUR)after mid-urethral sling placement with and without pelvic reconstructive surgery



Incidences and risk factors of postoperative urinary retention (POUR)after mid-urethral sling placement with and without pelvic reconstructive surgery

Sun MJ *TJOG Volume 64, Issue 2, March 2025, Pages 287-29*

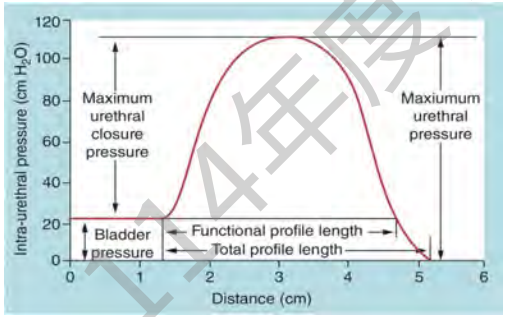
- POUR is **common**; however, **most episodes are transient** after mid-urethral sling placement with and without pelvic reconstructive surgery.
- POUR rates were **not** significantly different between patients who underwent sling insertion alone and those who underwent concomitant pelvic reconstructive surgery.
- **Old age (>65 years old), previous hysterectomy, lower MUCP, and single-incision slings** were the risk factors associated with POUR.
- **Early identification, prevention of bladder overdistension** after surgery, and proper management of POUR may prevent serious consequences.

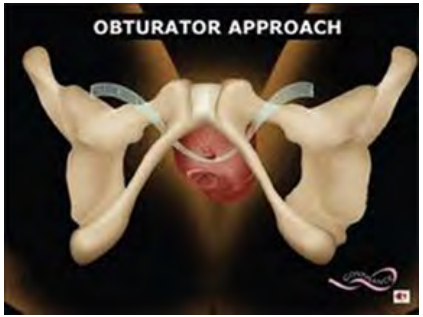
MUCP change after MUS operation for female SUI

- Only a **few** studies have identified the changes in MUCP post-sling insertion
- TVT operation→ changes the MUCP neither at rest nor at Valsalva

  Martan A, Ceska Gynekol 70(5):370–376
- TOT operation→slight increase in the MUCP

  Hsiao SM,Int Urogynecol J Pelvic Floor Dysfunct 19(5):627–632





MUCP change after MUS operation for female SUI (1)

Sun MJ Int Urogynecol J (2013) 24:823–829

Table 5 Comparison of urodynamic parameter changes pre-operation and post-operation

	TVT-O			MiniArc		
	Preoperatively, $n=42$	Postoperatively 3 months, $n=27$	*P* value	Preoperatively, $n=43$	Postoperatively, 3 months, $n=28$	*P* value
MAX (ml/s)	20.9±9.2	17.8±6.3	0.037	18.2±7.1	17.5±6.8	0.187
AVG (ml/s)	10.5±4.5	8.3±3.2	0.003	10.0±3.9	8.4±3.7	0.017
VVOL (ml)	283.8±147.0	251.6±114.3	0.121	278.9±151.5	302.5±142.2	0.543
PVR (ml)	38.0±45.2	40.0±61.0	0.630	32.0±62.2	25.4±39.4	0.766
MUCP (cm H_2O)	59.5±27.5	48.1±19.9	0.028	64.6±29.4	58.7±28.0	0.699

MAX maximal flow rate; *AVG* average flow rate; *VVOL* total voiding volume; *PVR* postvoid residual volume; *MUCP* maximum urethral closure pressure

- a **decrease in the MUCP** in both groups
- only the TVT-O group revealed a statistically significant decrease ,while the MiniArc group did **not**
- The **less invasive** nature of the MiniArc and pillow-effect tape tension in the urethra
- implies another potential advantage of the MiniArc over conventional SUI surgery
- **A lower decrease in the MUCP may preserve urethral continence function and prevent recurrent incontinence?**

MUCP change after MUS operation for female SUI (2)

Sun MJ *Taiwan J Obstet Gynecol. 2016 Feb;55(1):20-5*

Table 4

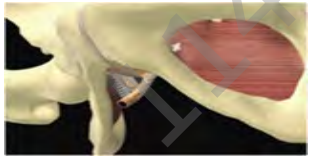
Comparison of the urodynamic parameters changes preoperation (preop) and postoperation (postop).

	MUCP ≥ 40 cmH_2O			MUCP < 40 cmH_2O		
	Preop, $n = 88$	3 mo postop, $n = 63$	p	Preop, $n = 24$	3 mo postop, $n = 18$	p
MAX (mL/s)	21.7 ± 8.5	18.7 ± 7.5	0.006	17.0 ± 7.1	18.8 ± 7.1	0.345
AVG (mL/s)	10.7 ± 4.4	8.6 ± 4.0	0.001	10.4 ± 6.4	9.3 ± 3.8	0.975
VVOL (mL)	309.6 ± 144.6	310.9 ± 140.3	0.819	240.6 ± 113.7	307.0 ± 101.5	0.065
PVR (mL)	31.1 ± 52.0	34.4 ± 42.0	0.646	39.9 ± 79.9	29.4 ± 48.9	0.472
MUCP (cmH_2O)	75.2 ± 22.7	58.72 ± 23.5	<0.001	31.2 ± 6.8	46.44 ± 19.9	0.006

p-value by Wilcoxon signed ranks test.

AVG = average flow rate; MAX = maximal flow rate; MUCP = maximum urethral closure pressure; PVR = postvoid residual volume; VVOL = total voiding volume.

- Statistically significant decrease in the MUCP in the MUCP >40 cmH2O group ($p < 0.001$) but a statistically significant increase in the MUCP < 40 cmH2O group ($p = 0.006$).



Is single incision midurethral sling effective in patients with low maximal urethral closure pressure?

MUCP change before after MUS operation for female SUI (3)

Mou-Jong Sun *Taiwan J Obstet Gynecol . 2025 Mar;64(2):287-292*.

Table 2
Comparison of the pre-operation and post-operation urodynamic parameters changes.

		No POUR					Transient POUR					Prolonged POUR					
		N	Median	Q_1	Q_3	P-value[‡]	N	Median	Q_1	Q_3	P-value	N	Median	Q_1	Q_3	P-value[‡]	P-value[†]
MAX (ml/sec)	Pre-op	558	18	13	24		131	17	12	23		13	19	12	23		0.253
	Post-op	558	16	12	22	<0.001*	131	18	13	22	0.455	13	13	11	15	0.054	0.413
	Change	558	1	-7	4		131	1	-5	5		13	-5	-12	0		0.067
AVG (ml/sec)	Pre-op	558	8	6	11		131	7	5	11		13	9	6	11		0.157
	Post-op	558	7	5	10	<0.001*	131	8	5	10	0.900	13	6	5	7	0.074	0.595
	Change	558	0	-3	2		131	0	-3	3		13	-2	-4	1		0.377
PVR (ml)	Pre-op	562	30	12	68		132	31	17	78		14	37	19	85		0.041*
	Post-op	562	29	10	60	0.049*	132	33	18	77	0.928	14	16	10	81	0.397	0.018*
	Change	562	-2	-28	19		132	-2	-28	34		14	-17	-72	22		0.671
MUCP (cmH_2O)	Pre-op	536	52	37	68		120	53	39	68		12	64	41	80		0.324
	Post-op	536	42	31	55	<0.001*	120	45	34	57	<0.001*	12	37	33	51	0.062	0.277
	Change	536	-7	-22	5		120	-6	-19	5		12	-16	-43	1		0.998
MUCP <30, N (%)	Pre-op	63	11.8				14	11.7				1	8.3				0.829
	Post-op	114	21.3			<0.001*	21	17.5			0.248	2	16.7			>0.999	0.338

POUR: postoperative urinary retention; Q_1: Percentile 25; Q_3: Percentile 75; Change = Post-op - Pre-op.
MAX: maximal flow rate; AVG: average flow rate; PVR: postvoid residual volume; MUCP: maximal urethral closure pressure.
* P-value <0.05.
‡ P-value by Wilcoxon Signed Ranks Test (pre-op and post-op comparison).
† P-value by Jonckheere-Terpstra test for trend.

Incidences and risk factors of postoperative urinary retention after mid-urethral sling placement with and without pelvic reconstructive surgery

台灣婦女泌尿醫學會成立與發展

- **1998 年**4月26日在台北馬偕醫院九樓大禮堂召開成立大會及學術研究會，**中華民國**婦女泌尿暨骨盆鬆弛醫學會(英文名稱Taiwan Urogynecological Association，簡稱**TUGA**) 成立
- **2007**年會員大會通過將學會中文名稱更改為**台灣**婦女泌尿暨骨盆醫學會
- 2014年亞太婦女泌尿醫學會（The Asia-Pacific Urogynecology Association, **APUGA**）成立
- 2016年台灣福爾摩莎婦女泌尿醫學會(**FUGA**)成立

蘇聰賢院士 Tsung-Hsien Su

馬偕紀念醫院婦產部暨婦女泌尿專科 資深主治醫師
國際婦產科醫學會(FIGO)執委會委員
亞太婦產科醫學會(AOFOG)副理事長
亞太婦女泌尿暨骨盆醫學會(APUGA)主席
財團法人台灣婦女健康暨泌尿基金會 董事長

主要經歷:

台北馬偕紀念醫院副院長
馬偕醫護管理專科學校 校長
國際婦科泌尿醫學會(IUGA)理事長暨執委會委員
亞太婦產科醫學會(AOFOG)婦女泌尿學委員會主席
台灣婦女泌尿暨骨盆醫學會(TUGA)創會理事長

盧佳序教授 LO,TSIA-SHU

IUGA國際婦女泌尿學會
委員: 決策委員會 (Steering Committee)
委員: 學術委員會 (Scientific Committee)
委員: 研究員發展委員會 (Fellowship development Committee)

IUJ國際婦女泌尿醫學雜誌 (International Urogynecology Journal)
編輯委員編輯委員會 (Editorial Board)

理事長亞洲婦女泌尿學人協會 (UG-Asia)
理事長台灣婦女泌尿暨骨盆鬆弛醫學會 (TUGA)

經歷:

IUGA國際婦女泌尿學會
亞洲主席 International advise board, Asia (2016.01-2018.12)

FIGO 國際婦產科聯合會
委員婦女泌尿委員會 (2018-2019)

AOFOG亞太婦產科醫學會
委員婦女泌尿委員會(2014.05-2016.05)

受獎項

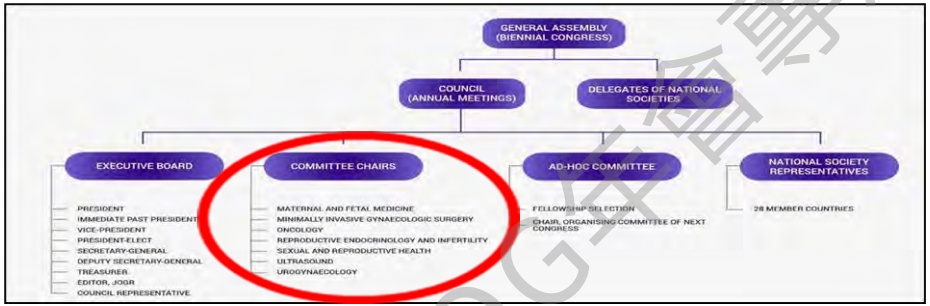
2020年度美國史丹佛大學公佈「全球前2%頂尖科學家」
2023年度IUGA年Best Abstract論文(國際婦女泌尿暨骨盆鬆弛醫學會)
2015年度AOCOG年會口頭報告首獎(亞太婦產科醫學會)
2014年度IUGA年會婦女泌尿教育影片首獎 (國際婦女泌尿暨骨盆鬆弛醫學會)
2004年度AAGL年會Robert B. Hunt論文獎 (美國內視鏡暨微創治療醫學會)

文獻發表

論文166 篇 (SCI文章-146 篇)

參與 亞太婦產科醫學會聯盟 (AOFOG)

AOFOG Committee Chair of Urogynecology



AOFOG Committee Chair of Urogynecology

AOFOG
ASIA & OCEANIA FEDERATION OF OBSTETRICS & GYNAECOLOGY

Tsung-Hsien Su
2002-2011

Ching Hung Hsieh
2015-2019

Mou-Jong Sun
2019-2022

Thomas Man-Jung Hung
2022-2024

歷年來彰基舉辦國內大型台灣婦女泌尿研討會

2002

歷年來在彰基舉辦10場以上國內大型台灣婦女泌尿研討會

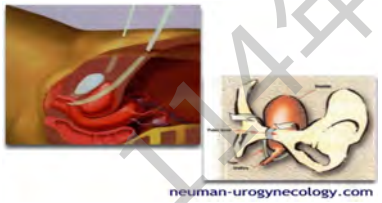
Learned from Dr Davila 2004 at CCH

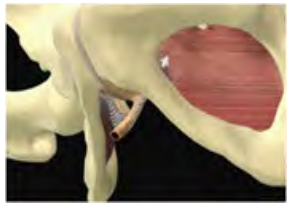
邀請國外專家手術示範演講及出國學習

國內外醫師至彰基學習微創婦女尿失禁手術

Conclusions

- **MUS is a gold standard treatment for SUI with the best cure outcome, each carries its own benefit and risk.**
- **All MUS in Taiwan deliver comparable good outcome in terms of efficacy and complication and endorsed internationally- IUGA and FIGO.**
- **SIS is a safe and highly effective treatment for USI even in women with low MUCP.**
- **POUR is common, however, most episodes are transient . The rate of POUR did not significantly differ between patients with and without concomitant PRS**
- **Old age (>65 years old), previous hysterectomy, lower MUCP, and single-incision slings** were the risk factors associated with **POUR.**





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Thanks for your attentions!