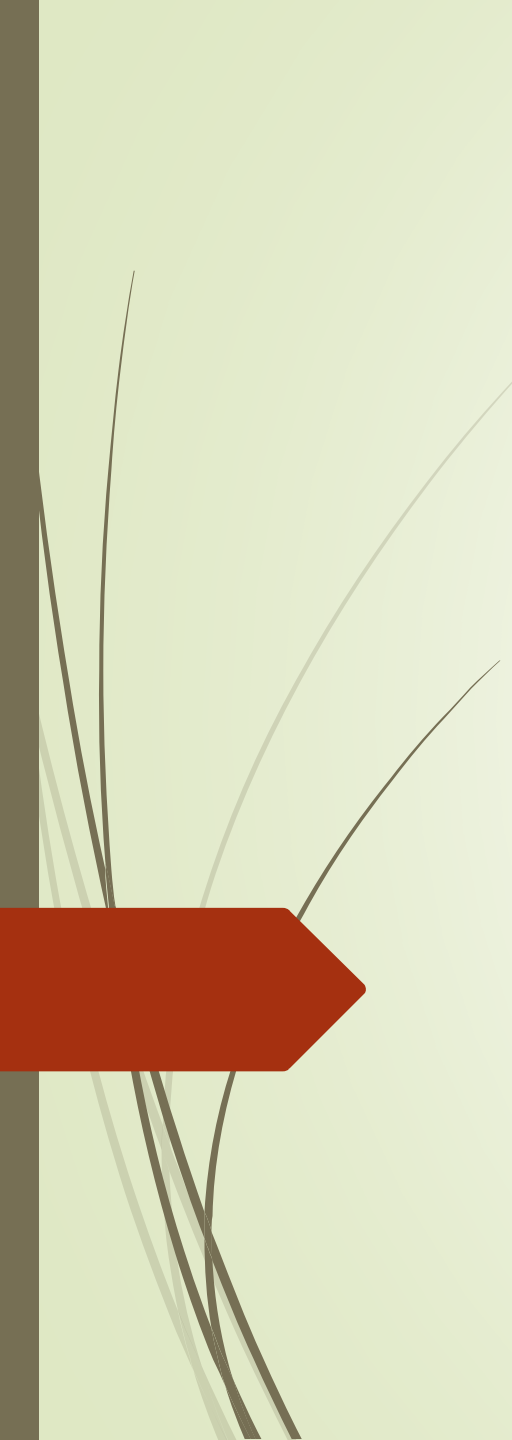




One sided Tight Pubo vaginal Sling for Women with ongoing urinary incontinence post VVF repair

Sunday Lengmang

5th February 2024



Evolution of the one sided tight PV Sling - Near Extinction of Urinary Diversion



Near Extinction of Urinary Diversion: Evolution of the one sided tight Pubo vaginal Sling

- Post closure urinary incontinence (PCUI)
 - nightmare
 - main reason for persistent urinary incontinence among women who had successful closure of urinary fistula
 - Main indication for urinary diversion
- There are many procedures employed to solve PCUI



PCUI procedures (My experience)

- 
- 1) Cystourethropexy
 - 2) PV sling with cadervetic graft
 - 3) PV sling with semi-synthetic graft
 - 4) PV sling with rectus abdominal fascia
 - 5) PV sling with fascia Lata
 - 6) PV Sling with Pubo-cervical fascia



PCUI procedures (My experience)

- 
- 7) Urethralization
 - 8) Urethral plug
 - 9) Injection of bulking agents (tegress)
 - 10) Tight PV sling using fascia Lata
 - 11) Tight PV Sling using Pubo-cervical fascia
 - 12) One sided tight PV sling using Pubo-cervical fascia



PCUI: Evolution of one sided tight PV sling

- Severe fibrosis makes dissection very difficult
- Sometimes dissection is only possible on one side.
- Peri-urethral bulking surgery stands out.
 - Immediately effective.
 - Unfortunately, 50% leak within 3 months; 80% leak within 6 months
- Valuable lessons:
 - Procedure that acts circumferentially is likely to be effective.
 - There need to be compression of a column of the urethra
 - None absorbable bulking agents will work best.

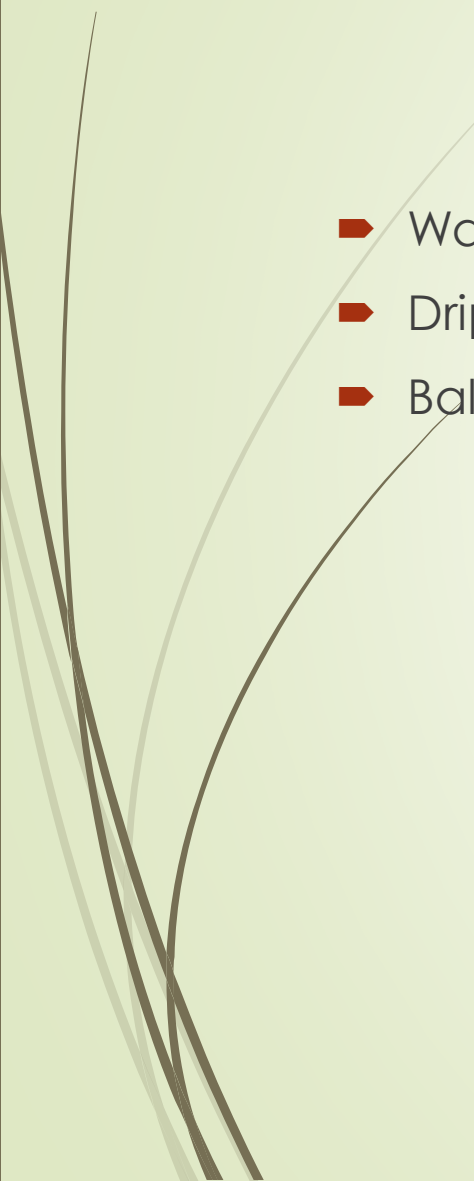


PCUI: Evolution of one sided tight PV sling : Lessons from urethral injuries / Symphyseal separation

- Continence is not affected by a shift of the urethra to one side
- Shifting the urethra to one side might actually improve continence
- ...Could tight PV sling be done where dissection is only possible on one side (which often is the case in bad cases).



PCUI: Evolution of one sided tight PV sling : Lessons from gardening / Playground

- Water horse
 - Drip irrigation
 - Balloon
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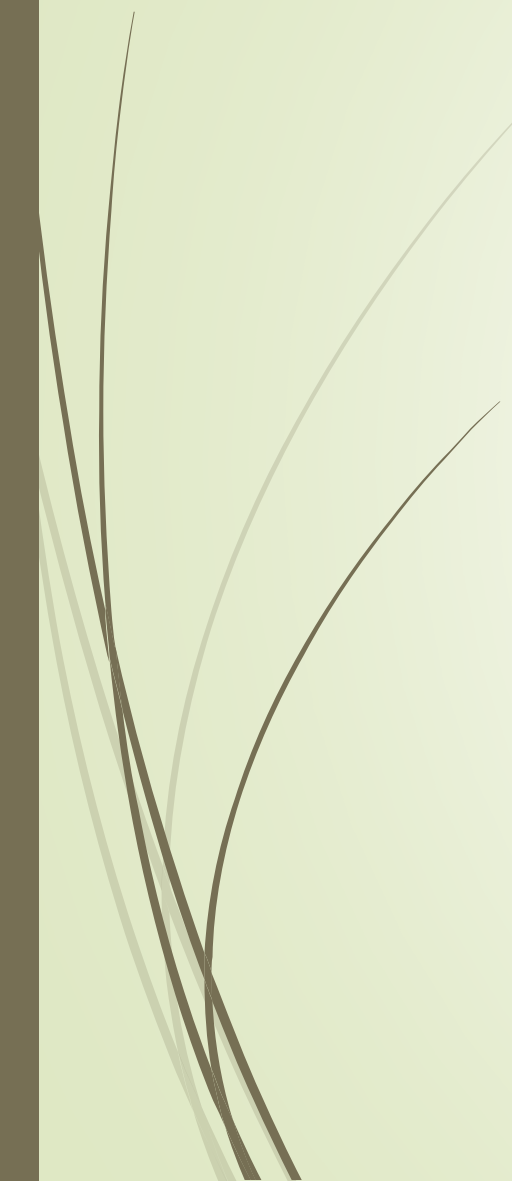


PCUI: Evolution of one sided tight PV sling : Lessons from gardening and playground

- Narrowing the urethra
 - Column of narrowed tube
 - Sling effect
 - Could be drawn to one side
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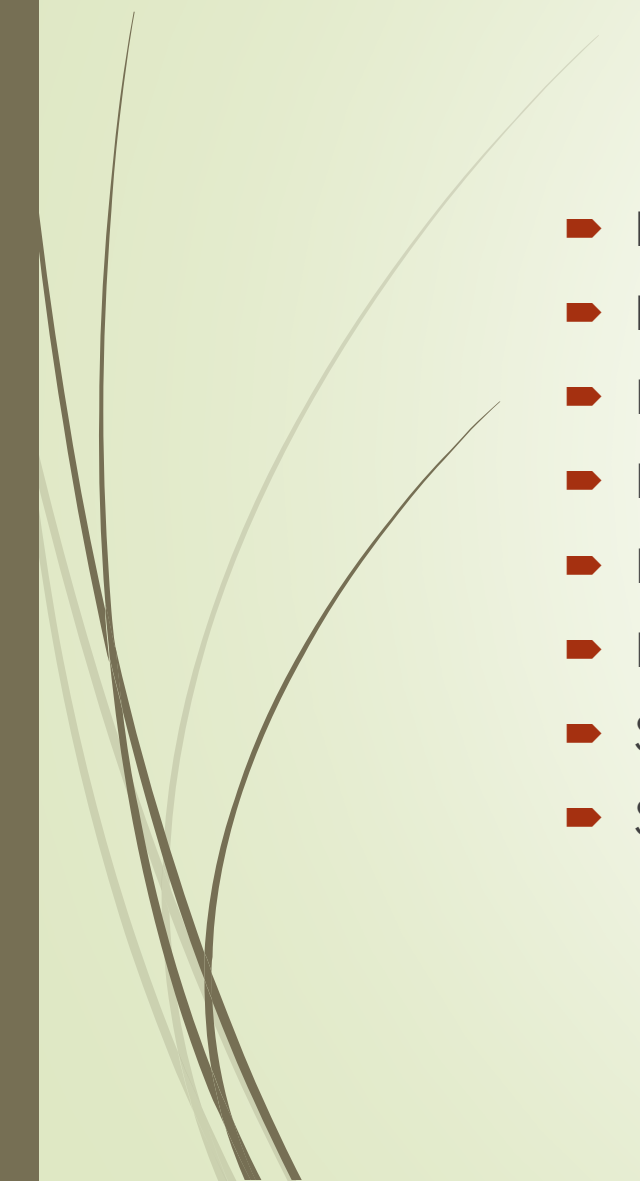


PCUI: Summary of lessons leading to one sided tight PV sling

- Severe fibrosis often restricts dissection to one side
 - Presence of persistent fistula in some cases
 - The more circumferential the procedure, the better expected outcome
 - Continence might improve by a shift of the urethra to one side
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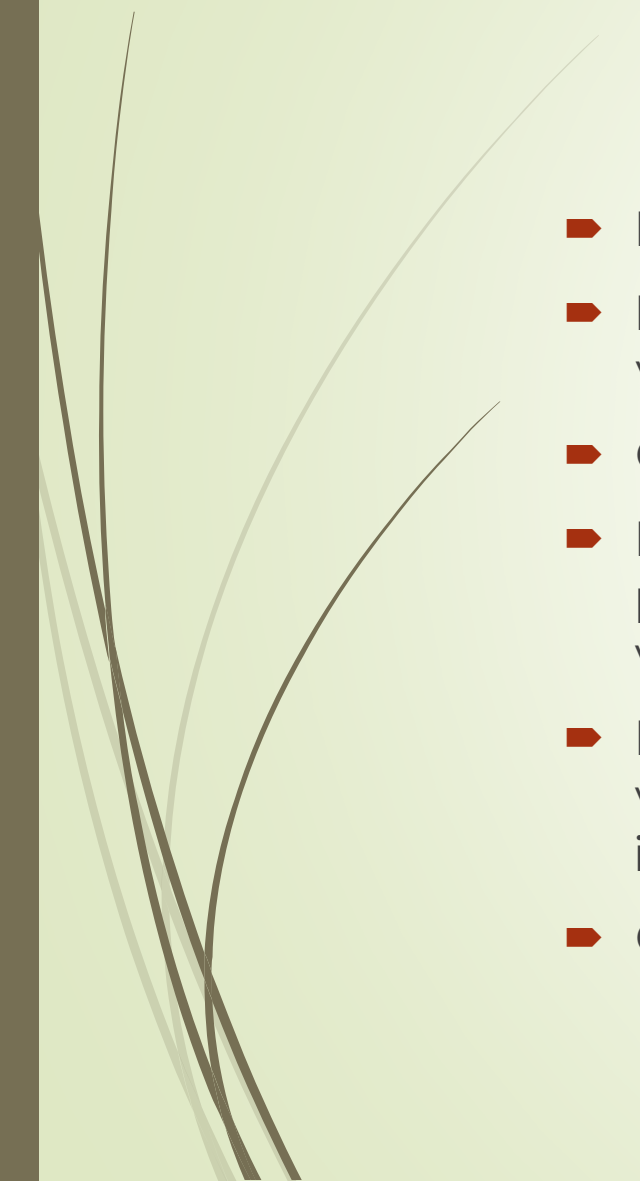


Description of one sided tight PV Sling

- Infiltration of weak adrenaline solution or saline if hypertensive
 - Inverted “U” shaped incision at the bladder neck
 - Dissect anterior vaginal wall off pubo-cervical fascia
 - Extend the dissection to paravesical spaces (sharp and blunt dissection)
 - Blunt dissection to the retropubic space of Retzius
 - Plicate proximal urethra and bladder neck
 - Stab skin 2cm above symphysis pubis
 - Spread sub-cut tissues with artery clamp
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Description of one sided tight PV Sling 2

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- Pass finger through paravesical space pushing bladder medially
 - Pierce Fascia of rectus abdominis with 15° or 30° Stamey needle lateral to your finger to ensure no bladder injury
 - Guide the Stamey needle out through that paravesical space
 - Load the Vicryl through the needle and pull out – up through the paravesical space, retropubic space and out of the supra-pubic stab wound
 - Pierce Fascia of rectus abdominis again at least 2cm behind the first site with 15° or 30° Stamey needle lateral to your finger to ensure no bladder injury
 - Guide the Stamey needle out through that paravesical space

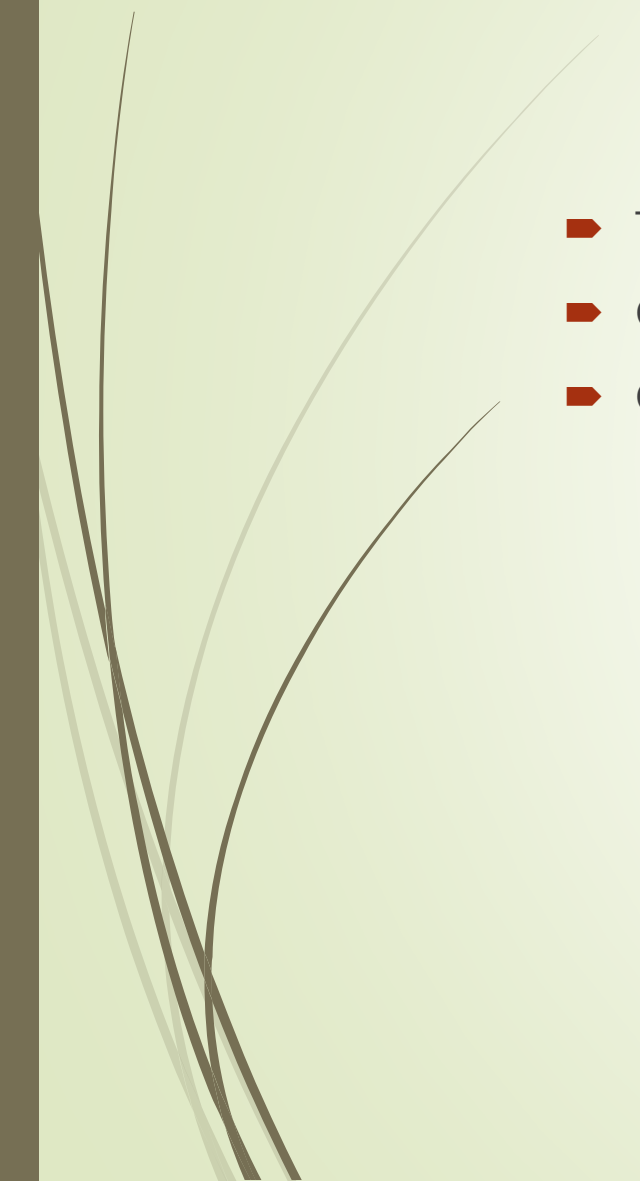


Description of one sided tight PV Sling 3

- Load the Vicryl through the needle and pull out – up through the paravesical space, retropubic space and out of the supra-pubic stab wound
- Do a gravity dye test
 - Ensure there is no fistula
 - Assess the bladder capacity
 - Test how tight the sling need to be in place
- Tie one knot
- Ask the patient to cough
- Make the knot tighter until there is no leak with cough



Description of one sided tight PV Sling 4

- ▶ Tie more knots
 - ▶ Close the abdominal skin wound
 - ▶ Close the anterior vaginal wall
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Result

- From 2020 to 2023
- Experience with close to 200 patients in Nigeria (Jos and 6 other states), Cote d'Ivoire
- We have data for about 109 in Jos, Nigeria
- We excluded 16 cases that were not done on non-fistula patients (SUI)
- Left with 93 patients

Results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Number of previous fistula repair surgeries TOTAL	93	1	12	3.14	2.170
Number of previous fistula repair surgeries at our facility	93	0	6	1.53	1.564
Current Age	93	15	60	31.45	9.445
Years living with Fistula	92	1	47	9.65	8.712
Valid N (listwise)	92				



Year		N of Patients	
	2020		25
	2021		3
	2022		51
	2023		14
Total			93



Complications



Type of Complication	N	%
Bleeding	7	7.5
Wound Infection	17	18.3
Malaria	5	5.4
Retention	5	5.4
None	59	63.4
Total	93	100

Outcome at Discharge

	Frequency	Percent	Cumulative Percent
Dry	29	31.2	31.2
Improved	40	43.0	74.2
Fistula not closed	13	14.0	
No improvement	11	11.8	
Total	93	100.0	



Outcome at Discharge

- Increases to **86.3%** if exclude those with obvious fistula

3 mo FU

		Outcome at Discharge				Total	%
		Dry	Fistula not closed	Improved	No improvement		
FU 3 mo	Better	0	0	3	0	3	3.2
	Dry	12	0	0	0	12	12.9
	Improved, no change	0	0	12	0	12	12.9
	No show	17	4	25	11	57	61.3
	Same, book for VVF repair	0	9	0	0	9	9.7
Total		29	13	40	11	93	100

6 mo FU

		Outcome at Discharge				Total	%
		Dry	Fistula not closed	Improv ed	No improv ement		
FU 6 mo	Better	0	0	3	0	3	3.2
	Dry	6	0	0	0	6	6.4
	Improved, no change	0	0	10	0	10	10.8
	No show	23	13	27	11	74	79.6
Total		29	13	40	11	93	100



One sided tight PV Sling

- Closest to bulking agents
- Acts by affecting most of the urethral circumference
- Acts on the serosal rather than the mucosal part of the urethra
- Is made tight enough to keep urine in the bladder
- Creates an angle that keeps the urine in
- Creates at least 1cm column of tight closure of urethra
- Could shift the urethra away from the midline
- Fibrosis keeps the urethra in place



One sided tight PV Sling: Advantages

- ▶ Could be done when only one paravesical space can be accessed (dissected)
- ▶ Could be done concurrently with small residual fistula repair
- ▶ Offers best outcome with success rate of about 80%
- ▶ We are now fixing cases that were deemed inoperable for decades
- ▶ This has significantly dropped need for urinary diversion
- ▶ Zero urinary diversion in 4 years



Thank you!