

Effective Adjustment of Retrograde Leak Point Pressure with a Novel Anchored Male Continence System

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Hypothesis / aims of study

Management of male SUI

- functional / fixed slings
- compressive / adjustable slings

Scarce data on urethral closure pressure after male sling implantation
The AdVance™ (Boston Scientific) fixed sling does not change voiding parameters, only ALPP increased significantly.¹
Literature data of compressive slings on target closure pressure range from 30 - 60 cmH₂O and varies by type of sling.
A pressure of 50 cmH₂O may serve as a reasonable threshold.²

Evaluation of urethral closure pressure

	UPP	ALPP VLPP CLPP	RLPP
In vivo	+	+/-	-
In vitro (Cadaver)	-	+/-	+

Post-Prostatectomy-Incontinence (PPI)²

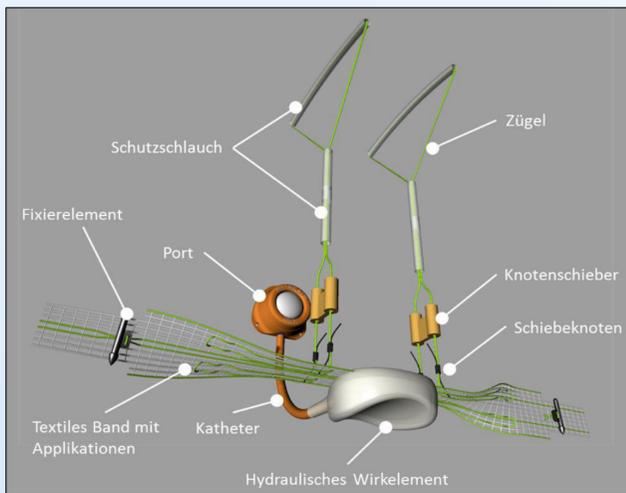
MUCP	ALPP	RLPP
52.0 +/- 21.1 cmH ₂ O	49.4 +/- 24.4 cmH ₂ O	48.0 +/- 13.5 cmH ₂ O

Regression analysis: RLPP versus MUCP, $r = 0.59$, $P < 0.005$
MUCP versus ALPP, $r = 0.75$, $P < 0.0001$
RLPP versus ALPP, $r = 0.79$, $P < 0.0001$

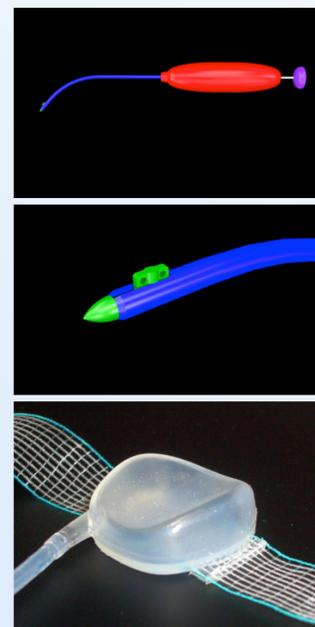
Conclusion: In male SUI sphincter function may be assessed equally well by MUCP, ALPP, or RLPP.²

Aims of study: Evaluation of efficacy of a novel compressive anchored male continence system by measurement of urethral closure pressure

Materials and methods



Novel anchored adjustable male continence system
Sling and anchor material: PVDF (polyvinylidene fluoride)
Cushion and tube material: silicone

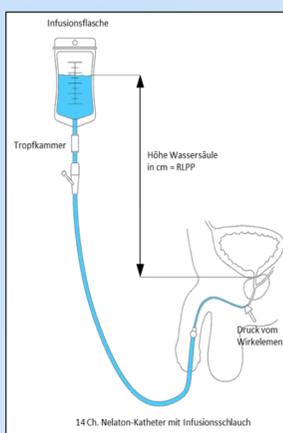
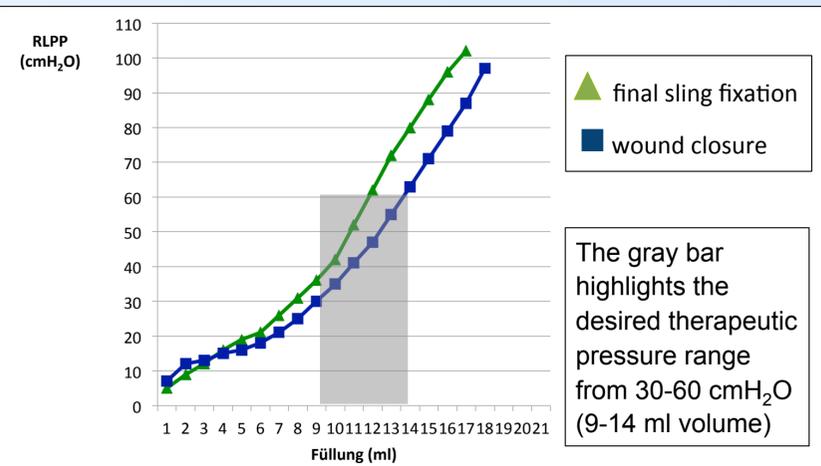
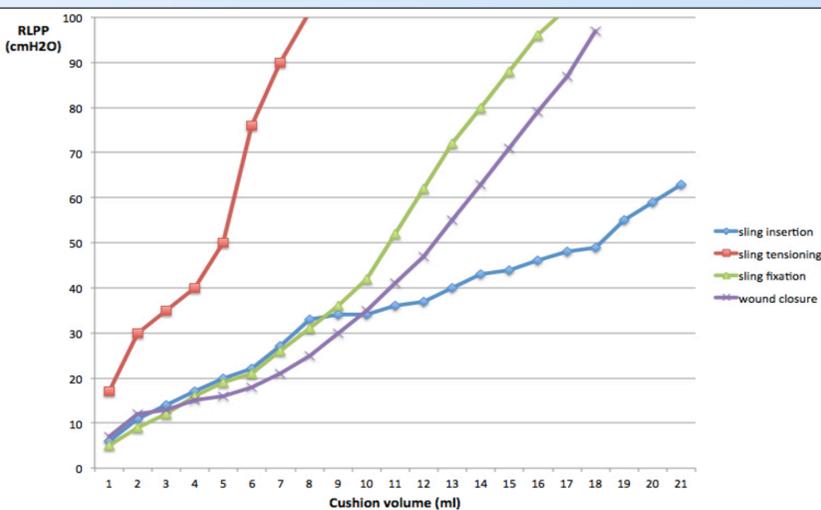


Simple bilateral intraobturator anchor fixation with a newly designed introducer

Results

4 series of RLPP measurement after

- 1) sling insertion
- 2) sling tensioning
- 3) final sling fixation
- 4) wound closure



Effectivity was measured as RLPP in fresh male cadavers via a CVP system

Interpretation of results

The newly designed anchor demonstrated easy application and excellent stability. It is suitable for single incision, outside-in, safe, and simple fixation of a novel adjustable male sling system.
After technical refinements the novel anchored male sling system presented with an easy and reliable insertion process to keep the sling and the central cushion in place.
With the novel anchored male sling system the retrograde leak point pressure can be effectively adjusted as a function of the filling volume of the central cushion. With regard to the literature the desired pressures between 30 and 60 cmH₂O could be well achieved with low filling volumes.
The relation of the filling volume of the device, urethral closure pressure, and continence status has to be determined in future clinical studies.

Concluding message

The novel anchored male adjustable sling system can effectively increase urethral closure pressure as measured as retrograde leak point pressure in fresh male cadavers. With the simple, minimally invasive, and reliable insertion process the device shows great promise for advancing male continence surgery.

References

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2. Comiter CV, Sullivan MP, Yalla SV. Correlation among maximal urethral closure pressure, retrograde leak point pressure, and abdominal leak point pressure in men with postprostatectomy stress incontinence. *Urology*. 2003 Jul;62(1):75-78

Disclosures

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