

Intraoperative Retrograde Leak Pont Pressure Measurement Improves Outcomes of the adjustable Argus® Sling and Reduces the Risk of Urethral Erosion



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#Poster Nr. 254

Introduction

The use of adjustable bulbourethral male slings may be a promising alternative to AUS for the treatment of male stress urinary incontinence (SUI) after prostatic surgery. It is adjustable and does not require manipulation before voiding. The Aim of the study was to report the role of intraoperative leak point pressure (RLPP) measurement in terms of risk of postoperative retention and urethral erosion.

Methods

The Sling was indicated in 117 patients within the observation period, there were lacking data regarding RLPP, postoperative micturition or residual volume, so 24 patients were excluded. The data of 93 patients (average age 70 years) with moderate-to-severe SUI who underwent implantation of male Argus® sling between 3/2006- 9/2020 were retrospectively analyzed.

RLPP was measured intraoperatively, and the sling was progressively adjusted by tensioning the silicone columns through the washers as described by Romano et al. in 2006¹. RLPP measurement was performed at baseline (before sling positioning) and after tensioning the sling but before closing the incision.

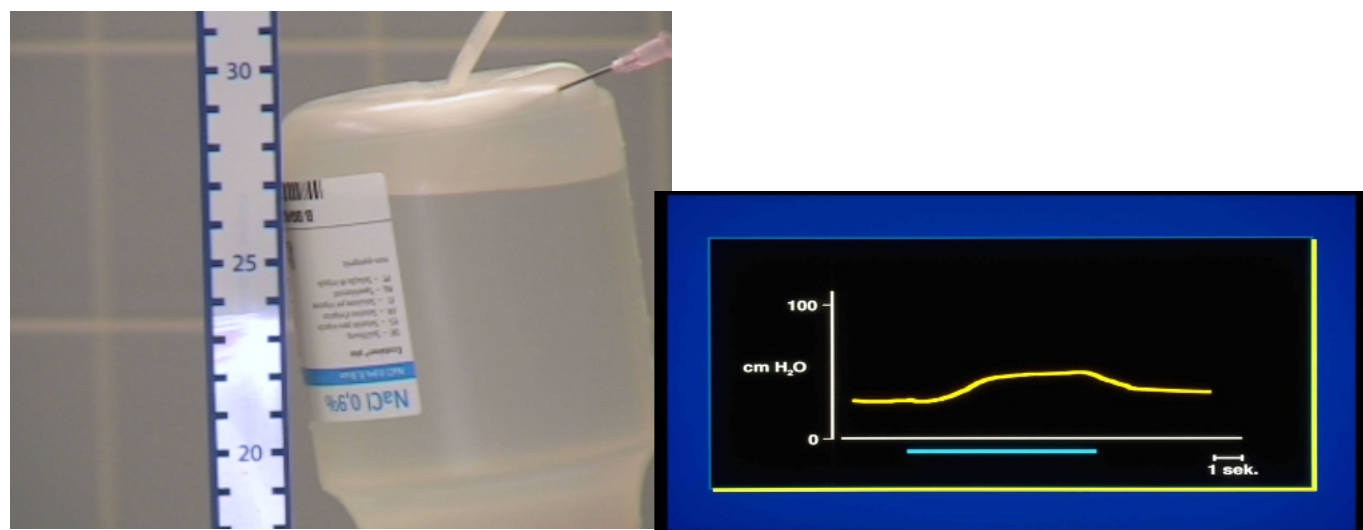


Fig 1. To ensure that the system was properly functioning, bladder pressure was measured and recorded. After that the Argus sling was progressively adjusted by tensioning the silicone columns through the washers.



Fig 2. Adjustment in a loose manner.

References

1. Romano S V, Metrebian SE, Vaz F, et al. An adjustable male sling for treating urinary incontinence after prostatectomy: a phase III multicentre trial. *BJU Int.* 2006;97(3):533-539.
2. Hübner WA, Gallistl H, Rutkowski M, Huber ER. Adjustable bulbourethral male sling: experience after 101 cases of moderate-to-severe male stress urinary incontinence. *BJU Int.* 2011;107(5):777-782.

Results

The average intraoperative baseline RLPP was 22.7 cmH₂O and was generally adjusted 10-15 cmH₂O higher than the reference RLPP measured initially before sling placement (range 20-47 cmH₂O; median 28).

The cure rate was 80% (defined as reduction of p/d of ≥ 50%), in a mean follow-up of 92 months. Temporary urinary retention occurred in 12 cases (12,9%) and was resolved conservatively by placing a transurethral catheter for 1 week, only in one case loosening of the sling was required.

The postoperative uroflow studies showed in median Q_{max} of 13,5 ml/sec, only in 5 cases (5,4%) an incomplete emptying of the bladder with residual urine >40 ml (range 40-170ml) was reported.

Erosion was reported in 9 (9,7%) cases after a median FU of 57.6 months.

For validation purposes, we did subgroup analysis and compared the results of the patients with different RLPP.

There were 8, 53 and 32 patients in the subgroups with RLPP 15-25, 26-35 and >35 cmH₂O respectively. In der subgroup analysis high RLPP >35 cmH₂O correlated significantly with explantation of the device ($p=0.026$).

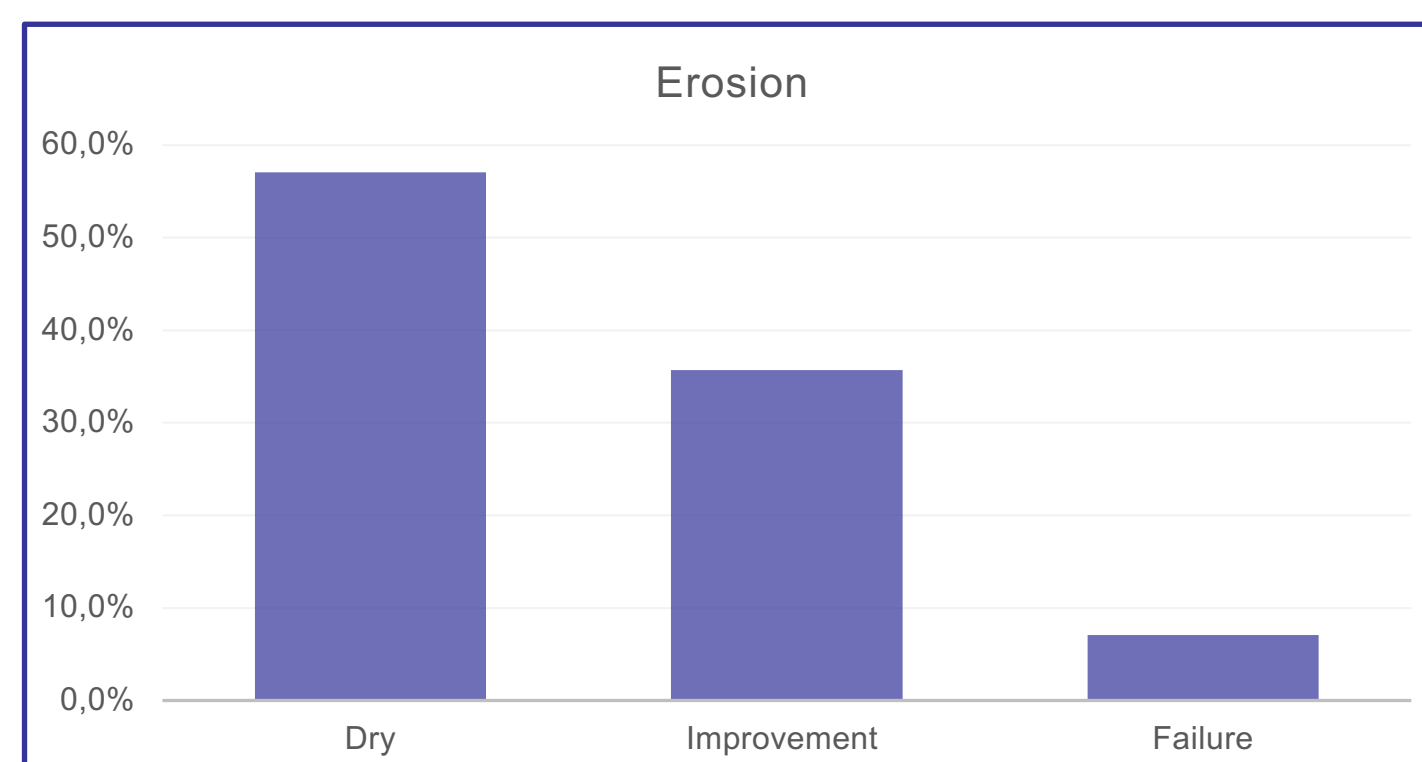


Fig. 3: Correlation between erosion and RLPP in the subgroup analysis

Conclusions

We evaluated the data of one of the biggest cohorts with the Argus sling. This study demonstrates that the intraoperative RLPP measurement and correct adjustment prevents erosion and is crucial to achieve sufficient results.

High RLPP does not improve the continence outcomes but increases the risk for erosion. ARGUS sling may be indicated for the treatment of SUI in patients with moderate to severe SUI as an alternative for AUS, particularly in dexterity-impaired patients and where operating a pump for voiding is not desirable.