Functional outcomes of adjustable continence therapy (ACT™ Balloons) for recurrent or persisting stress urinary incontinence in females after primary midurethral sling

Ameli G. ,Weibl P. , Rutkowski M. ,Hübner W.

Department of Urology, Teaching Hospital, Clinic of Korneuburg, Austria

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Introduction

Currently, the midurethral slings (MUS) are used as a standard treatment for female stress urinary incontinence (SUI), however, some patients will not be cured after MUS surgery and currently, there is no consensus on how to manage these patients. Repeat MUS procedures might be an appropriate solution for women showing persistent urethral hypermobility but there is limited evidence regarding the effectiveness. Furthermore, there is increasing concern regarding the use of mesh slings and whether they will remain available worlwide is uncertain. This constitutes a major problem not only for the patient, but also for the clinician who is faced with choosing a second surgical procedure with the best possible outcome.
Aim of this monocentric study was to retrospectively evaluate the efficacy of adjustable ACT™ balloons as a complementary surgery in treatment of recurrent or persist SUI in females after primary MUS implantation.

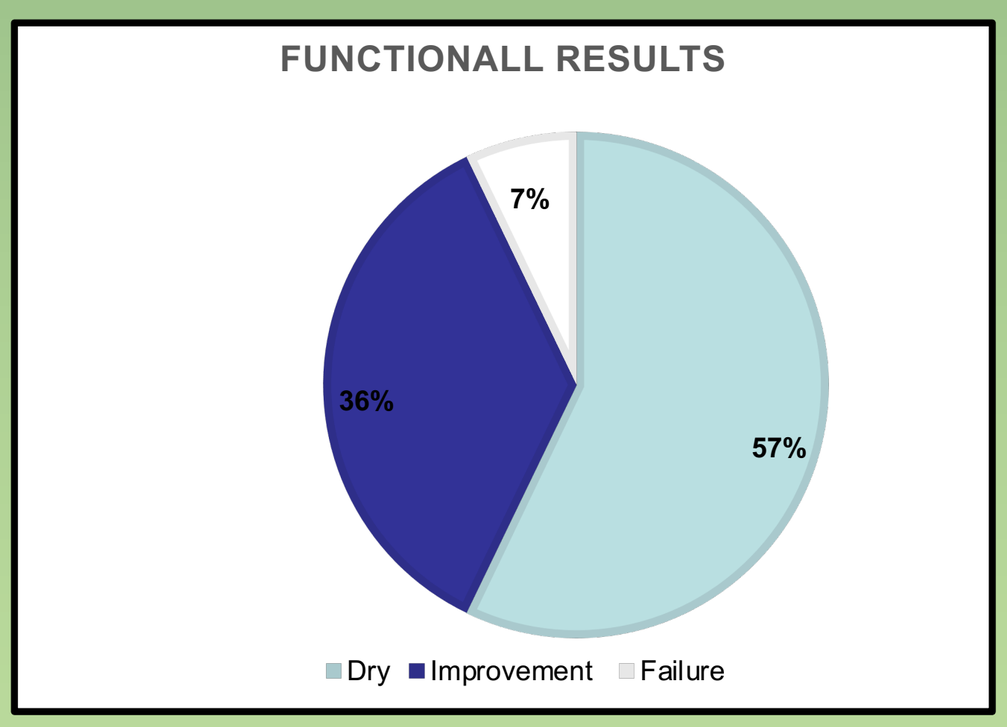
Methods

This monocentric retrospective analysis evaluates the data of all non-neurological women, who suffered from persistence or recurrent stress urinary incontinence after MUS implantation and undergoing ACT™ balloon placement between February 2008 and September 2021. Continence was defined by using 0-1 safety pas per day. During follow up examinations, women were assessed for subjective satisfaction and objective cure rates.

Results

A total of 14 women were included, median age 64,2 years (interval 40,4-73,9). The balloon placement was performed in median 7.9 years (interval 0.9-13 years) after MUS implantation. 6/14 (42,9%) of the patients had one or more SUI surgeries between Sling and ACT balloons (3 slings and 2 AUS, 1 sacropexy and sling). One patient had multiple SUI surgeries between initial MUS and ACT balloons.
Mean follow up time was 58.5 months (median 31.5 months).
The pad per day usage improved from 3.5 (±1.1) to 2 (±1.0) p/d.
At 3-year follow up, 8 out of 14 patients (57,1%) declared themselves fully continent after ACT balloon placement and 5 out of 14 (35,7%) were at least improved. One patient (7,1%) found the procedure unsuccessful even after several adjustments, although the p/d was improved.
Quality of life was significantly improved and 13 out of 14 patients (92,9%) were satisfied with the functional result. In overall 2 adjustments of the balloons were accomplished to receive the desirable results.

Explantation occurred in 3 patients (21,4%), caused by balloon migration after a mean follow up time of 3.1 year.
In 2 cases the explanted balloon was replaced at a later point on.



Interpretation of results

Although the success rate of ACT™ balloons women with persisting incontinence after MUS is lower than that reported for primary implantation, it remains satisfactory because it is a minimal invasive method with shorter recovery times and comparable efficacy to other methods. Furthermore, the balloons are an alternative to repeated MUS procedure with a low complication rate.
In this complex group of patients their continence device is transformed into an adjustable system.
The explantation rate was 21%, which is lower as described in the literature and confirms that using ACT™ balloons as a second line therapy after sling failure is a safe procedure.

Conclusions

The ACT™ balloon have a significant efficiency for use after female sling failure and can be used in second line therapy. Larger cohorts are essential to evaluate the efficacy and safety of this procedure.

References

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