

Introduction

Mid urethral slings (MUS) currently are the gold standard for surgical treatment of female SUI

MUS surgery is not always a viable option due to:

- Mesh-surgery related policy
- The wish to conceive a child
- Dysfunctional voiding
- Serious comorbidities

In these circumstances, injection of a urethral bulking agent can be applied instead [1]

An RCT suggested that, even though polyacrylamide hydrogel (PAHG) is less effective than tension-free vaginal tape (TVT), it is a safe and durable treatment option for females with SUI [2]

PAHG is mostly offered to women as a salvage or secondary treatment after MUS failure

PAHG can also be used as primary second-line therapy for patients with SUI, when MUS surgery is not an option [3]

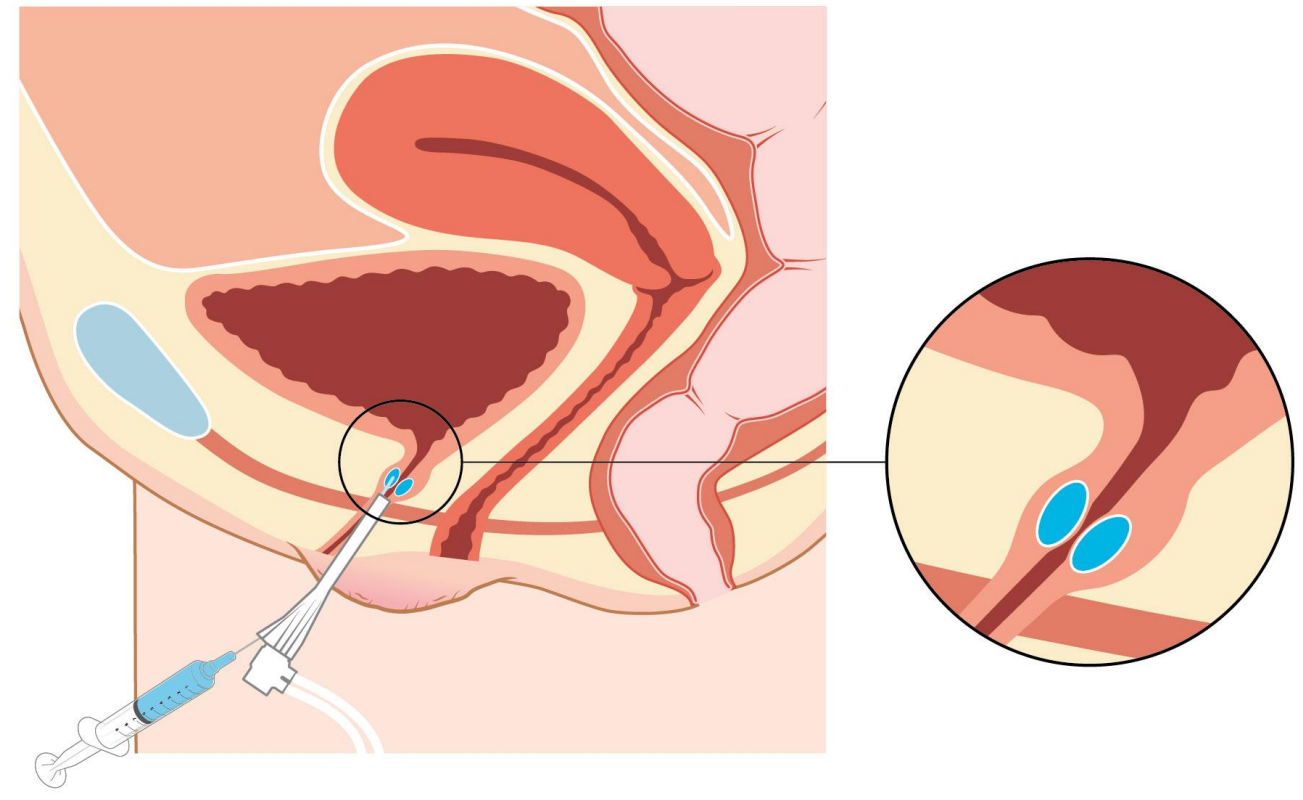


Figure 1. Schematic application of PAHG

Aim

To assess the outcome of **PAHG urethral injections as a recourse treatment** for women with SUI, who are not eligible for treatment with MUS

Methods and Materials

- Single-arm, patient cohort study
- Patients with SUI or stress-predominant MUI
- Treated with PAHG between 2009 and 2020
- Questionnaire in April 2020
- Retrospectively collected patient data
- Primary outcome:
 - Subjective improvement rate
 - Patient Global Impression of Improvement (PGI-I) "(very) much better"
- Secondary outcomes:
 - Subjective cure rate
 - Urogenital Distress Inventory (UDI) question 4 "No"
 - Complication rate
 - The amount of PAHG injected
 - The number of reinjections
 - Patient satisfaction
 - VAS of ≥ 8.0
 - Patients' recommendation of PAHG treatment

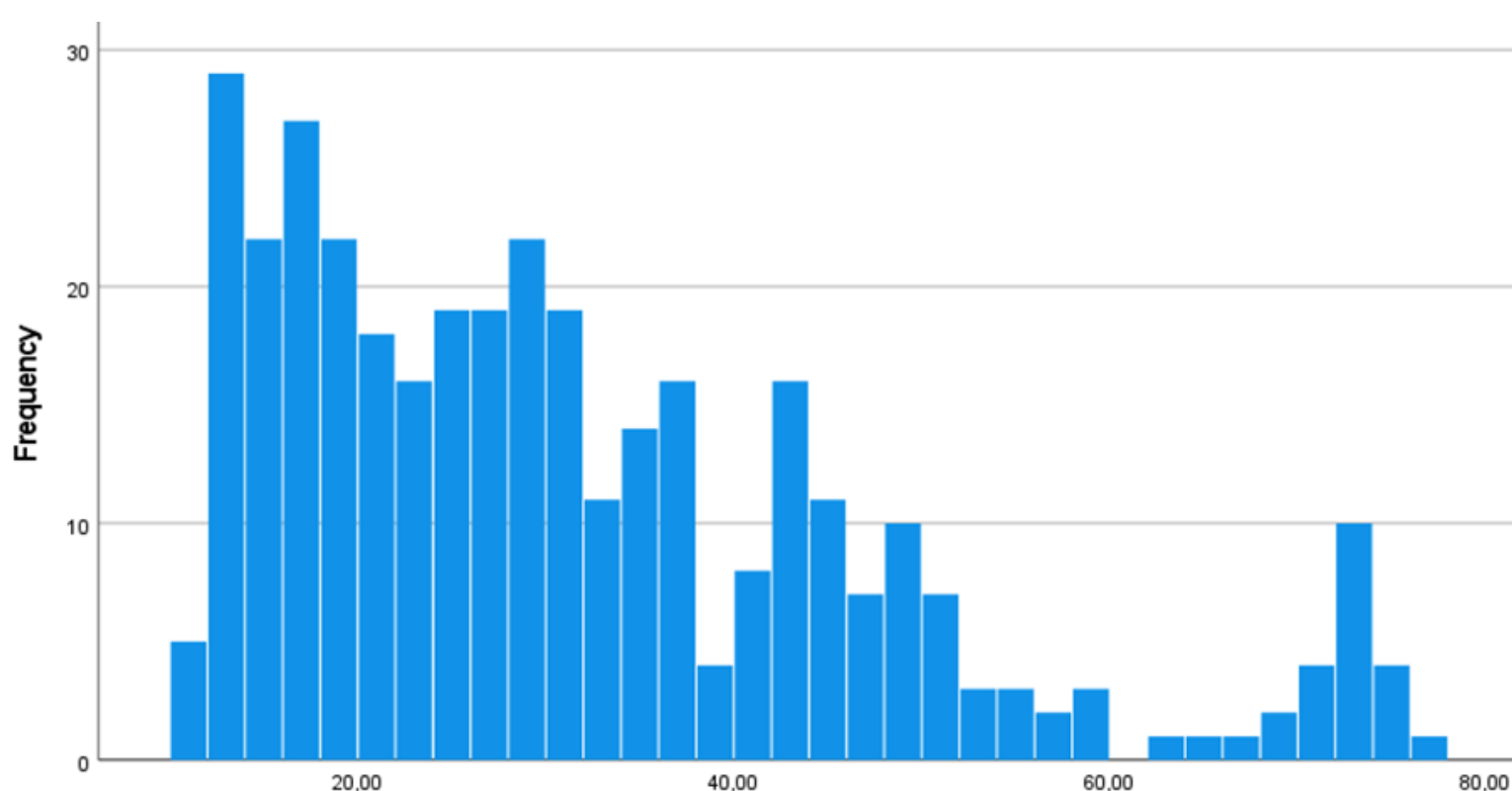


Figure 2. Follow-up time in months

Results

- 357 women with a median follow-up time of 2 years and 4 months
- 153 (42.9%) responded to questionnaire
- Subjective improvement rate of 52.1%
- Subjective cure rate of 30.9%
- Minor adverse events in 21% of patients
- No serious adverse events
- Injected with 1.4 mL of PAHG
- 134 women (37.5%) needed reinjections
- Patient satisfaction of 48.6%
- 78.5% would recommend PAHG treatment to others

Table 1. Patient Global Impression of Improvement

PGI-I, n (%)	N=146
Very much better	29 (19.9%)
Much better	47 (32.2%)
A little better	26 (17.8%)
No change	28 (19.2%)
A little worse	5 (3.4%)
Much worse	8 (5.5%)
Very much worse	3 (2.1%)

PGI-I=Patient Global Impression of Improvement

Discussion

Large cohort of patients

Half of the women experienced an improvement of their SUI after PAHG urethral injections as recourse treatment

Patients unfit to receive MUS can still be treated for their SUI

Persistent high satisfaction rate after mid- to long-term follow-up

A safe procedure with only minor adverse events

Conclusions

Our study demonstrates that PAHG is a valuable asset in the treatment of female SUI over a longer period of time, when MUS surgery is not an option

References

1. Altman D, Ghilotti F, Bellocco R, Zetterstrom J, Kopp Kallner H. Transurethral Polyacrylamide Hydrogel Injection Therapy in Women Not Eligible for Midurethral Sling Surgery. *Female Pelvic Med Reconstr Surg.* 2017;23(5):318-323.
2. Itkonen Freitas AM, Isaksson C, Rahkola-Soisalo P, Tulokas S, Mentula M, Mikkola TS. Tension-Free Vaginal Tape and Polyacrylamide Hydrogel Injection for Primary Stress Urinary Incontinence: 3-Year Followup from a Randomized Clinical Trial. *J Urol.* 2022;208(3):658-667.
3. Hussain SM, Bray R. Urethral bulking agents for female stress urinary incontinence. *Neurourology and Urodynamics.* 2019;38(3):887-892.