

Feasibility, Safety and Early Outcomes of Transobturator Sling (TOT) Placement under Local Anesthesia Combined with Pudendal Block

Theodoulidis I, Trompoukis P, Papastamatiou M, Roussos N, Arvanitidou A, Theodoulidis V, Stasinou E, Grimbizis G, Mikos T
1st Department of Obstetrics and Gynecology, Aristotle University of Thessaloniki, Greece.

Prospective cohort

n = 70

6-month
follow-up

MAIN FINDING:

All 70 procedures were completed under local anesthesia + bilateral pudendal block

- ✓ 0 conversions or anesthetic escalation
- ✓ Mean intraoperative VAS: 2.8/10
- ✓ Objective cure at 6 months: 95.7%

Hypothesis / Aim

To evaluate the feasibility, safety, tolerability and short-term efficacy of inside-out TOT placement performed under peri-urethral local anesthesia combined with bilateral pudendal nerve block in women with moderate to severe stress urinary incontinence (SUI).

Study design and methods

- **Prospective cohort** of 70 consecutive women with **moderate** (20%) or **severe** (80%) **SUI** based on the 1-3-5 cough stress test.
- **Inside-out** transobturator sling placement using DynaMesh-SIS®.
- Under **Local Anesthesia Combined with Pudendal Block**, no sedation, regional or general anesthesia; sling tensioning adjusted intraoperatively by cough stress testing.
- **Outcomes:** Feasibility outcomes included successful completion under local anesthesia, anesthetic escalation, complications, operative time, VAS pain score (0-10) at 1, 3 and 6 hours and 6-month objective [cough stress test (1-3-5)] /subjective (ICIQ-UI-SF, ICIQ-FLUTS, PGI-I, PGI-S) outcomes.

Baseline characteristics

Patients	70
Age, years	63.5 ± 10.4
BMI, kg/m ²	28.7 ± 4.2
Severe SUI	56 (80.0%)
Moderate SUI	14 (20.0%)
ICIQ-UI SF	13.84 ± 1.98
ICIQ-FLUTS	18.93 ± 4.67
VLPP	69.0 ± 25.0

All women underwent urodynamics, POP-Q, pelvic floor ultrasound and validated questionnaires preoperatively.

Feasibility and safety

100%

completed under local + pudendal block

0

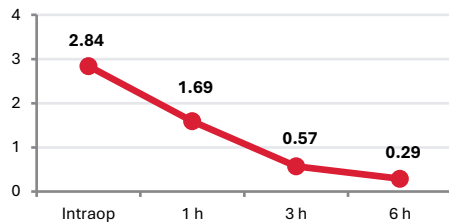
conversions or anesthetic escalation

0%

intraoperative complications

Mean operative time: 33.1 ± 6.8 min

Pain trajectory (VAS 0-10)



Pain was low intraoperatively and declined rapidly within the first postoperative hours.

Predictors of intraoperative pain

Covariate	β (Δ VAS)	p
Age	-0.002	0.898
BMI	+0.023	0.554
GH (Genital Hiatus)	+0.422	0.196
TVL (Total Vaginal Length)	+0.012	0.930

No statistically significant predictors were identified.

6-month outcomes

95.7%

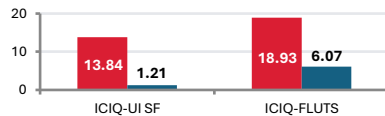
objective cure: negative cough stress test

4.3%

mild residual SUI only

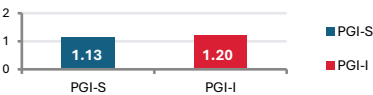
0%

erosions at follow-up



ICIQ-UI SF and ICIQ-FLUTS improved significantly (p < 0.001).

PGI-I and PGI-S indicating high subjective satisfaction.



Ultrasound findings

Bladder neck mobility decreased from 1.64 ± 0.65 to 1.15 ± 0.51 (p < 0.001). At follow-up, mean sling mobility was 0.67 ± 0.20 cm, mean distance from urethra 0.38 ± 0.07 cm and mean distance from external orifice 1.67 ± 0.20 cm.

Interpretation

The combination of local peri-urethral infiltration with bilateral pudendal nerve block provided consistent intraoperative tolerability, with low VAS scores and no need for anesthetic escalation despite a cohort predominantly composed of severe SUI cases.

Concluding message

TOT placement under local anesthesia with pudendal nerve block is a feasible ambulatory option for moderate to severe SUI, with low pain, no anesthetic escalation and excellent short-term efficacy.

References:

1. Ghanavati S, Leslie SW, Derian A. Pudendal Nerve Block. [Updated 2024 Sep 2]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2026 Jan-. https://www.ncbi.nlm.nih.gov/books/NBK551518/?utm_source=chatgpt.com
2. Slopnick EA et al. Pudendal nerve block analgesia at the time of vaginal surgery: randomized double-blinded sham-controlled trial. Urogynecology. 2023;29:827-835.