



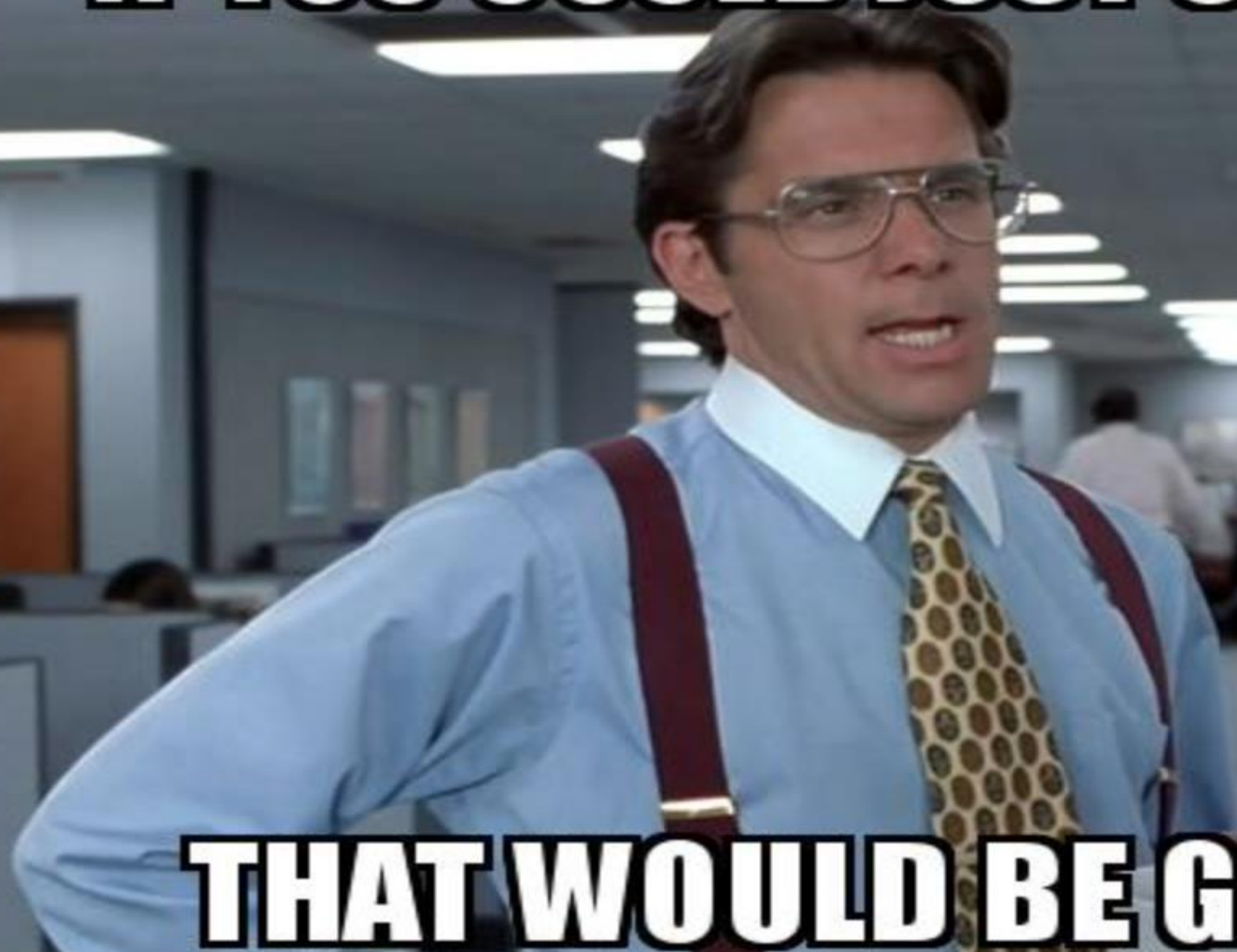
Ziv Medical Center

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Affiliated with the Faculty of Medicine in Zefat,
Bar Ilan University

Can the mini-sling become
the golden standard for
treating stress urinary
incontinence?

Walaa abboud.MD

IF YOU COULD JUST SAY YES,



THAT WOULD BE GREAT

Historical aspects of the mid urethral sling-treatment of urinary incontinence

- **The first generation** in 1996 as retropubic transvaginal tape
- **Second-generation** use the transobturator route(TVT-O).



investigators showed that the tension-free vaginal tape was equivalent in success to an open retropubic colposuspension, with fewer complications at 1 and then 5 years.

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Ferdinando Fusco, Mohamed Abdel-Fattah, Christopher R. Chapple, Massimiliano Creta, Sabrina La Falce, David Waltregny and

Giacomo Novara

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Giacomo Novara, Antonio Galfano, Rafael Boscolo-Berto, Silvia Secco, Stefano Cavalleri, Vincenzo Ficarra and Walter

Artibani

European Urology, 2008-02-01, Volume 53, Issue 2, Pages 288-309, Copyright © 2007 European Association of Urology

Complications

- Bladder perforation / mesh inside the bladder or urethra
 - Cystoscopy
- Bleeding / hematoma
- Voiding dysfunction
- Groin pain, especially in tvt-to

The third generation: mini-sling AS an important element in modern urogynecology.

- To achieve the **same cure rates** with **less invasive procedure**
 - Smaller dissection
 - Less probability to injure obturator nerve/bladder/bowel
- Less mesh
- Faster
- Under Local anesthesia/office procedure?



Well yes, but actually no

Debodinanc e Jacquetin B Cosson M	2009 J Gynecol Obstet Biol Reprod (Paris).	154 patients Multi center Prospective	Cured 70.3% Failed 18.4%	De novo urge 12.8% De novo VD 9.5%
Jeanette L . <i>Et al</i>	2010 ANZJOG	42 patients Prospective	Objective success 58.3% Subjective success 51.3%	De novo urge 10.3%
L. Krofta <i>Et al</i>	2010 Int Urogynecol J	86 patients Prospective	Objective cure 52.4% Subjective cure 59.7%	De novo urge 24.4%
Cornu JN. <i>Et al</i>	2010 Eur Uro	45 patients Prospective	Cured 40% Failed 42%	
Giovanni A. <i>Et al</i>	2010 Int Urogynecol J	84 patients TVT-O vs TVT-S Prospective	Cure rate TVT-S 81.6% TVT-O 83.8%	Low complication rate Both groups

TVT-Secur

Success rate between **50-70%**
Immediate after the procedure
at 1 year follow up

available at www.sciencedirect.com
journal homepage: www.europeanurology.com



European Association of Urology



Platinum Priority – Review – Female Urology – Incontinence

Editorial by Jean-Nicolas Cornu and Francois Haab on pp. 481–482 of this issue

Single-Incision Mini-Slings Versus Standard Midurethral Slings in Surgical Management of Female Stress Urinary Incontinence: A Meta-Analysis of Effectiveness and Complications

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Evidence synthesis:

- A total of 758 women in nine RCTs with a mean follow-up of 9.5 mo were included.
- SIMS were associated with significantly lower patient-reported and objective cure rates at 6–12 mo compared with SMUS .
- Repeat continence surgery and de novo urgency incontinence were significantly higher in the SIMS group.

SIMS were associated with significantly shorter operative time, lower day 1 pain scores and less postoperative groin pain

Conclusions:

SIMS are associated with inferior patient reported and objective cure rates on the short-term follow-up, as well as higher reoperation rates for SUI when compared with SMUS.

Table 1a – Summary of characteristics of included randomised studies*

Study	Design	Participants	Intervention (SIMS)	Comparison (SMUS)	Outcomes
Abdelwahab et al. [36]	Randomised single-centre study; Egypt	60 women with USI (lost to follow-up: 1)	SIMS (n = 30) TVT-Secur	RT-TVT (n = 30)	Reported cure at 6 mo, operation time, length of stay, safety, and postoperative complications
Basu and Duckett [37]	Randomised single-centre study; UK; equivalency design	70 women with USI and failed conservative management (lost to follow-up: 0)	SIMS (n = 37) MiniArc	RT-TVT (n = 33)	Reported cure at 6 mo, operation time, length of stay, safety and postoperative complications
Djehdian et al. [38]	Randomised single-centre study; Brazil	50 women with SUI and without prolapsed of more than POP-Q stage 1 (lost to follow-up: 6)	SIMS (n = 25) Ophion	TO-TVT (n = 25)	Reported cure at 6 mo, subjective cure, operation time, postoperative stay, day 1 VAS pain score, and perioperative complications
Enzelsberger et al. [18]	Quasi-randomised single-centre study; Austria	90 women with USI 3–4 wk before surgery and positive stress test (lost to follow-up: 0)	SIMS (n = 45) TVT-Secur	TO-TVT (n = 45)	Objective cure at 6 and 24 mo, operation time, and safety.
Friedman [39]	Randomised single-centre study; Israel	84 women with USI and positive stress test (lost to follow-up: 0)	SIMS (n = 42) TVT-Secur	TO-TVT (n = 42)	Patient-reported cure at 12 mo, postoperative pain, length of hospital stay, and safety
Hinoul et al. [40]	Randomised multicentre study; Netherlands and Belgium; noninferiority design	194 women with USI and positive stress test (lost to follow-up: 0)	SIMS (n = 96) TVT-Secur	TO-TVT (n = 98)	Objective cure at 12 mo, patient-reported cure, operation time, postoperative hospital stay, day 1 VAS pain score, QoL, and safety
Hota et al. [43]	Randomised single-centre study; USA; noninferiority design	84 women with USI and positive stress test (lost to follow-up: 44)	SIMS (n = 42) TVT-Secur	TO-TVT (n = 44)	Objective failure at 12 mo, QoL questionnaires, postoperative pain, operation time, operative complications, and safety
Kim et al. [41]	Randomised single-centre study; Korea	40 women with USI (lost to follow-up: 0)	SIMS (n = 20) TVT-Secur	TO-TVT (n = 20)	Subjective cure at 6 mo, QoL questionnaires, postoperative urodynamics, and safety
Tommaselli et al. [42]	Randomised single-centre study; Italy; equivalency design	84 women > 40 yr of age with SUI lasting at least 2 yr and USI (lost to follow-up: 9)	SIMS (n = 42) TVT Secur	TO-TVT (n = 42)	Objective cure at 12 mo, patient-reported cure, operation time, day 1 VAS pain score, and safety

SIMS = single-incision mini-slings; SMUS = standard midurethral slings; USI = urinary stress incontinence; f/u = follow-up; RT-TVT = retropubic tension-free vaginal tape; SUI = stress urinary incontinence; POP-Q = pelvic organ prolapse quantification; TO-TVT = transobturator tension-free vaginal tape; VAS = visual analogue scale; QoL = quality of life.

* An extended version of Table 1a is available online.

TVT-S 72%

MiniArc (AMS)

- 75 publications
- Success rate >80%
- Long follow-up, > 5 years



Dirk De Ridder <i>Et al</i>	2010 Int Urogynecol J	MonoArc (56) vs MiniArc (75) Retrospective 2 centers	Cure rate Monoarc 89% MiniArc 85%	Same complicatio n rate
Ryan B. Pickens <i>Et al</i>	2011 Urology	120 patients Prospective	Cure rate at 1 year 94%	Very low complicatio n rate
Kennelly J. <i>Et al</i>	2010 J Urol	188 patients Prospective	Cure rate at 1 year 90.6%	Very low complicatio n rate
Lo TS. <i>Et al</i>	2018 J Minim Invasive Gynecol.	85 patients Retrospective	Cure rate at 5 year 84.7%	Very low complicatio n rate
Jiao B. <i>Et al</i>	2018 Medicine	1794 patients Meta analysis	Cure rate same as MUS	Lower complicatio n rate than MUS

Ophira (promadon)

- 15 publications
- 1 study with 8 years follow-up
- 85% success rate, 5% failure



Ajust (Brad)

- 28 publications
- Comparative studies
- Few meta analysis



available at www.sciencedirect.com
journal homepage: www.europeanurology.com



European Association of Urology



Platinum Priority – Review – Female Urology – Incontinence

Editorial by Maurizio Serati on pp. 428–429 of this issue

Single-Incision Mini-Slings Versus Standard Midurethral Slings in Surgical Management of Female Stress Urinary Incontinence: An Updated Systematic Review and Meta-analysis of Effectiveness and Complications

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Evidence synthesis: A total of 26 RCTs ($n = 3308$ women) were included. After excluding RCTs evaluating TVT-Secur, there was no evidence of significant differences between SIMS and SMUS in patient-reported cure rates (risk ratio [RR]: 0.94; 95% confidence interval [CI], 0.88–1.00) and objective cure rates (RR: 0.98; 95% CI, 0.94–1.01) at a mean

follow up of 10.0 mo. These results pertained on comparing SIMS versus RP-TVT and RP-TVT separately. SIMS had significantly lower postoperative pain scores (weighted means difference [WMD]: -2.94 ; 95% CI, -4.16 to -1.73) and earlier return to normal activities and to work (WMD: -5.08 ; 95% CI, -9.59 to -0.56 and WMD: -7.20 ; 95% CI

Conclusions: This meta-analysis shows that, excluding TVT-Secur, there was no evidence of significant differences in patient-reported and objective cure between currently used SIMS and SMUS at midterm follow-up while associated with more favourable recovery time. Results should be interpreted with caution due to the heterogeneity of the trials included.



Results of MiniArc procedure for stress and mixed urinary incontinence in ambulatory patients under local anesthesia

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Methods

- This is a retrospective cohort study
- Included all the patients at Ziv Medical Center who underwent the SIMS procedure **with MiniArc, without concomitant surgery**
- Between January 2011 and March 2013
- Patients were evaluated 6 weeks, 6 months, and 12 months after surgery, and once a year subsequently
- Telephone interviews were conducted to evaluate patient satisfaction
- Outcome measures included: SUI cure rate, urinary urge incontinence (UUI) cure rate in patients with mixed urinary incontinence (MUI), intra and post-operative complications and patient satisfaction.

Results

- The cure rates of SUI (objective and subjective) were 89%.
- UUI was cured in 40% of patients.
- No major complications occur, neither voiding obstruction or groin pain.
- Telephone interviews conducted after 26 months on average revealed high satisfaction rate from the procedure (8.8 out of 10) and from the local anesthesia.
- Visual analog scale (VAS) rating was low during and after the procedure (2.38 and 2.69 respectively).

Can the mini-sling become the golden standard for treating stress urinary incontinence?

[Cheng-Yu Long](#), [Gin-Den Chen](#)  & [Rebecca G. Rogers](#)

[International Urogynecology Journal](#) **32**, 1–2 (2021) | [Cite this article](#)

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- Two randomized clinical trials comparing the mini-sling to TVT-O published in the IUJ reveal similar efficacy, safety and mesh erosion rates between the two procedures. In addition, the trials found that women who underwent a mini-sling procedure reported lower intensity and a shorter duration of postoperative pain after 2 and 3 years of follow-up

Randomized Controlled Trial > *Int Urogynecol J.* 2018 Sep;29(9):1387-1395.

doi: 10.1007/s00192-018-3624-4. Epub 2018 Mar 16.

A randomized comparison of a single-incision needleless (Contasure-needleless®) mini-sling versus an inside-out transobturator (Contasure-KIM®) mid-urethral sling in women with stress urinary incontinence: 24-month follow-up results

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Original Article | [Published: 13 August 2019](#)

TVT-O vs. TVT-Abbrevio for stress urinary incontinence treatment in women: a randomized trial

[Marzio Angelo Zullo](#), [Michele Carlo Schiavi](#) ✉, [Paolo Luffarelli](#), [Giovanni Prata](#), [Anna Di Pinto](#) & [Cosimo Oliva](#)

International Urogynecology Journal 31, 703–710 (2020) | [Cite this article](#)

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SIMS (without TVTS) have promising results

▬ Success rate

↓ Complication rate

Can be done under local anesthesia
daycare unit/office procedure