



Platinum Priority – Editorial and Reply from Author  
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## Female Slings: Where Do We Stand?

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The introduction of female slings in the mid-1990s by Ulmsten and Petros was the beginning of a revolution in the treatment of female stress urinary incontinence (SUI) over the last two decades [1]. First, slings were implanted via a retropubic approach. Later, the transobturator approach was introduced by Delorme [2]. With this new approach, severe complications associated with the retropubic implantation route (eg, bladder perforation, retropubic bleeding, and hematoma) were reduced. However, the transobturator approach is also associated with complications (eg, groin/thigh pain and higher rates of vaginal erosion) [3]. In several studies, comparable results for female slings and colposuspension were shown [4]. Transobturator slings can be implanted via an inside-out or outside-in approach. In the short term, equivalent effectiveness for both routes were shown [5].

Today, slings are the treatment of choice for female SUI and have replaced colposuspension. Why? In contrast to colposuspension, female slings are associated with improvements including lower postoperative pain, shorter operative time, shorter hospital stay, and faster return to normal activity [6].

However, in contrast to colposuspension, only a few long-term studies of retropubic slings have been published and, unfortunately, no long-term studies on transobturator slings exist. In a recently published study of retropubic tension-free vaginal tape (TVT), a subjective satisfaction of 89.7% was reported after 10 yr [7]. However, a slight but not significant trend for decrease in satisfaction in comparison to the 1-yr data (93.7%) was seen. The data for objective cure also decreased slightly (from 95.2% to 93.1%) [7]. Unfortunately, only much shorter follow-up data are available for the transobturator approach.

The article by Abdel-fattah and colleagues in this edition of *European Urology* reports the results of a randomized controlled trial with 3-yr follow-up comparing the inside-out and outside-in transobturator slings [8]. This trial included 341 women. However, due to a lost to follow-up rate of 30%, data of 238 women were reported. In this study, only subjective results were evaluated, namely, a patient-reported success rate using the Patient's Global Impression of Improvement questionnaire and the International Consultation on Incontinence Questionnaire-Short Form. In addition, further treatment of SUI, improvement in quality of life, late complications, and risk factors for late failure were evaluated.

No significant difference between the inside-out and outside-in approaches was seen in patient-reported outcome, patient satisfaction, quality of life improvement, and sexual function. For both techniques, the success rate decreased significantly over time (81.3% at 1-yr follow-up to 73.1% at 3-yr follow-up). Unfortunately, it was not possible to identify any independent risk factor for late failures. Six percent of the cohort received a repeat surgery (eg, TVT, inside-out transobturator TVT, rectus fascia sling). Of these patients, only 68% were finally cured.

It must be noted that in this study only subjective cure was evaluated. However, a sufficient evaluation includes subjective and objective assessments, not only the patient's subjective satisfaction, which limits the value of the results. Another significant limitation, as rightly pointed out by the authors, is a high lost to follow-up rate of 30%. In addition, no detailed evaluation of complications was performed. Patients were only asked by questionnaire. Therefore, the complication rate seems to be underreported. A recently published study showed later complications after sling implantation, with a peak between 1 and 5 yr postopera-

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tively (eg, vaginal exposure in 25.7% of cases) [9]. In addition, complications associated with a surgical procedure should be reported in a standardized way, for example, according to the Dindo-Clavien classification, to improve the comparability of different studies.

Another important issue after sling implantation is dyspareunia. The study showed an improvement in Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire scores of 73.6% and a reduction of sexual function in 20.9%, with no significant difference between the implantation routes. However, only 46.2% of the patients completed the questionnaire after 3 yr. In addition, no evaluation of possible causes for these results was performed.

In short- and midterm follow-up, several studies have shown the effectiveness of transobturator slings for the treatment of SUI with no impact of the route—inside-out versus outside-in—on outcome. However, long-term data are still lacking and we cannot neglect the decrease in success rate over time. Many open questions concerning female slings, both transobturator and retropubic, remain: Will the cure rate decrease successively over decades? What are the risk factors for late failure? Will complications increase in the long run? How can we preoperatively select patients to improve surgical results? What is the best treatment for women with recurrent or persistent SUI after first sling implantation? Should we treat women with a life expectancy of  $\geq 20$ –30 yr with a sling?

Female slings are easy and fast to implant. Therefore, since the introduction of the first female slings, several hundred thousand were implanted in women with stress incontinence. However, it is alarming that we have still no sufficient randomized long-term trials addressing all the important issues. Therefore, we should not implant slings uncritically but only after intensive evaluation of our patients.

Probably the challenge for the future will be determining how we can protect women from SUI. Therefore, it is imperative to understand the pathophysiology of female SUI in depth. Maybe new pathophysiologic modifications of

female slings or even new treatment options will be developed.

**Conflicts of interest:** The author has nothing to disclose.

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## Platinum Priority

**Reply from Authors re: Ricarda M. Bauer. Female Slings: Where Do We Stand? Eur Urol 2012;62:852–3**

**Synthetic Midurethral Slings Stand Firmly on Solid Ground as a Surgical Treatment for Stress Urinary Incontinence in Women**

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For women in the United Kingdom, the lifetime risk of undergoing surgical treatment of stress urinary incontinence (SUI) is 3.6% [1]. Smith et al. [2] recently reported that the synthetic midurethral sling (MUS)—namely, the transobturator tension-free vaginal tape (TO-TVT)—is the most commonly performed procedure for surgical treatment of female SUI worldwide [2]. Several randomised controlled trials (RCTs), systematic reviews, and meta-analyses, in addition to a Cochrane Review, have confirmed the efficacy of synthetic MUS in the cure or improvement of SUI, primarily at the short-term and midterm follow-ups. In a recent and direct meta-analysis of RCTs, we have confirmed the lack of significant differences in patient-reported and objective success rates between the two surgical approaches for TO-TVT (inside-out and outside-in) with  $\leq 1$  yr of follow-up [3]. We therefore believe that synthetic