CORRESPONDENCE

Urinary Incontinence in Women: Part 1 of a Series of Articles on Incontinence

by PD Dr. med. Christian Dannecker, Prof. Dr. med. Klaus Friese, Prof. Dr. med. Christian Stief, Dr. med. Ricarda Bauer in volume 24/2010

Local Estriol Treatment

All women with urinary incontinence should be provided with the opportunity for individualized treatment. In women with an overactive bladder, this includes local vaginal administration of estriol (0.5 mg/day). This metabolite of estradiol, which does not affect the endometrium, does not require addition of gestagen because it binds to the estrogen receptor for 1–4 hours only, compared with 6–24 hours for estradiol. This difference, by a factor of 6, means that local estriol treatment does not incur any risk of thromboembolism or increased diagnoses of breast cancer, according to studies from Scandinavia

To treat urge incontinence that develops after the menopause as a result of tissue atrophy subsequent to estrogen deficiency, estriol has been successful for 30 years. In urinary urge in women of perimenopausal age, progesterone deficiency should be borne in mind. Substitution treatment (locally-vaginally, without any relevant risks) reduces detrusor overactivity. This applies to women with a fairly recent menopause.

Estriol has a proliferative effect in the vaginal, urethral, and bladder epithelium via beta-receptors. Estriol binds by a factor of 7 less often to the alpha-receptor than estradiol (dominant in the endometrium and glandular breast tissue). Estriol improves perfusion in the urethral area including closure mechanisms via beta-receptors in the endothelia. Local estriol 0.5 mg/day for 2–3 weeks is then reduced to 3-day intervals and later 1-week intervals. Optimum therapy is reached after 3 months.

A prospective, multicenter study (1) showed for 80% of 600 postmenopausal women with symptoms of incontinence a subjective improvement after 6 weeks (even for grade 3 incontinence). High frequency of micturition halved. These findings were confirmed by a smaller study (2) and a placebo controlled study (3): local estriol significantly improved incontinence as a result of urogenital atrophy in 7 out of 10 women; in the placebo group, only 1 in 7 women experienced an improvement.

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Short Periods of Observation

The evaluation of Dannecker's interdisciplinary group of authors, of surgical procedures for urinary incontinence in women, differs from the guideline of the Association of the Scientific Medical Societies (Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften, AWMF) (1). The key message, that tension-free slings should be preferred and that colposuspension should be used only for recurrences, needs to be qualified. Observational periods of 2 years or less are not sufficient for a reliable evaluation (2). For alloplastic materials, the AWMF is asking for more randomized studies with longer follow-up and sufficient statistical power. Consequently, the AWMF rates open colposuspension as the type of continence surgery with the highest efficacy in long term follow-up for primary surgery as well as after recurrences (evidence level Ia).

Further, the increased occurrence of severe complications after implantation of alloplastic material deserves particular attention (3). Before alloplastic materials become routinely used in clinical practice, animal experiments as well as consecutive clinical studies are required for the material as well as the indication. Unfortunately, the legal requirements in the past were too lax, which means that more than 200 (!) different types of meshes are available for use in hernia operations, prolapse surgery, and continence surgery.

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In Reply

Professor Wenderlein again points out the importance of local hormonal treatment in treating the overactive bladder. In our article, we referred to the effectiveness of local estrogen treatment, citing a current systematic review. Local application of estrogen has a firm place in the treatment of urinary incontinence.

Otto, Bagner, and Klosterhalfen in their contribution essentially articulate three statements.

- They criticize our statement, that tension-free slings are equally as effective as traditional methods, is not valid because the observational periods, of 2 years or less, were not long enough.
- They say that in our article, the indication for colposuspension applies to recurrences only.
- And, citing their own article in Deutsches Ärzteblatt, they point out problems associated with using alloplastic materials.

We wish to comment as follows.

- For tension-free slings, we wrote in our article: "Success rates over time are between 73% and 95% and are thus comparable with those associated with colposuspension; this has been shown in randomized controlled trials." Among others, we cite 2 studies with follow-up periods of 5, or 4–8 years, respectively (1). Further studies with longer follow-up periods (up to 11.5 years) have been published, which have shown the high efficacy and safety of tension-free tape surgery (2, 3).
- We also mentioned the fact that open colposuspension is supported by a vast array of good data and listed different indications for the procedure; recurrence was only one of these. Other listed indications are: incontinence surgery in the context of laparotomy and in the context of abdominal descent surgery. Colposuspension can of course still be used primarily for the surgical treatment of stress incontinence, even if this is less common now thanks to the success of the tension-free slings.
- With regard to alloplastic materials, a distinction needs to be made between incontinence treatment and surgery for prolapse. In the latter, alloplastic meshes can now luckily be successfully deployed after recurrence. In primary surgery, tension-free slings have also proved successful. The tension-free tape (TVT) procedure is regarded as the greatest innovation in the treatment of stress incontinence. In this context, we would d like to mention correspondence by Dimpfl and Thunn, Watermann and Götze, which was published in response to the article by Otto in Deutsches Ärzteblatt.

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