Int Urogynecol J (2013) 24:2147–2148
DOI 10.1007/s00192-013-2190-z

Urogynecology digest

Presented by Ilias Giarenis

Transobturator tapes: 5-year outcome

Serati M, Bauer R, Cornu JN, Cattoni E, Braga A, Siesto G et al (2013) TVT-O for the treatment of pure urodynamic stress incontinence: efficacy, adverse effects, and prognostic factors at 5-year follow-up. Eur Urol 63:872–878

This is a prospective multicentre observational study that aims to evaluate the efficacy and safety of the inside-out tension-free vaginal transobturator tape (TVT-O) at 5-year follow-up. It reports medium-term objective and subjective outcomes of women with pure stress urinary incontinence (SUI), who had TVT-O implanted without any concomitant procedure. Objective cure was defined as the absence of urine leakage during a stress test. Subjective success was indicated both by "very much improved or much improved" in the Patient Global Impression of Improvement scale (PGI-I) and by a patient satisfaction score of ≥8 in a single, self-answered Likert-type scale of 1–10. A total of 191 patients were included in this study by the 4 enrolling departments. The 5-year subjective and objective cure rates were 90.3 and 90.8 % respectively. At 5 years, 24.3 % of patients reported de novo overactive bladder (OAB) symptoms, treated with a combination of antimuscarinic therapy, onabotulinumtoxinA and percutaneous tibial nerve stimulation. There were two cases of vaginal erosion recognised 12 months after TVT-O, but no cases of late complications. Of the patients, 9.9 % complained of groin pain 24 h after surgery, but at 5-year follow-up, no cases of groin pain remained. On multivariable analysis, the history of previous anti-incontinence procedures was the only independent predictor of subjective [hazard ratio (HR) 4.4; $p=0.009$] or objective failure (HR 3.7; $p=0.02$). No predictive factor of de novo OAB was identified in the univariable and multivariable comparison.

This study provides further evidence that TVT-O is a highly effective operation with a low rate of complications after 5-year follow-up. Based on these data, there is no gradual decrease in the efficacy of the TVT-O and no major late complications. This evidence can facilitate preoperative patient counselling in the current climate, where the insertion of midurethral tapes is scrutinised following the recent US Food and Drug Administration (FDA) warning. The higher success rate compared to previous case series of transobturator tapes is probably related to the careful selection of the study population and the definition of cure. Studies with long-term outcomes (more than 10 years) for transobturator tapes, ideally randomised controlled trials (RCTs) comparing them with retropubic tapes, are required to support further their use for patients with SUI.

Pelvic organ prolapse 20 years after childbirth

Gyhagen M, Bullarbo M, Nielsen T, Milsom I (2013) Prevalence and risk factors for pelvic organ prolapse 20 years after childbirth: a national cohort study in singleton primiparae after vaginal or caesarean delivery. BJOG 120:152–160

This is a registry-based national cohort study, which aims to investigate risk factors for symptomatic pelvic organ prolapse (POP) 20 years after childbirth. Women who had their first delivery, vaginal or caesarean, between 1985 and 1988 and no further births thereafter were invited to participate in the SWEPOP (SWEdish Pregnancy, Obesity and Pelvic floor) study in 2008. The population and the obstetric data were obtained from the Swedish Medical Birth Register. A postal questionnaire was sent to the participants with 31 questions about current height and weight, urinary incontinence and POP, menstrual status, hysterectomy, menopausal status and hormone replacement therapy. A validated five-item questionnaire was used to diagnose POP. Multivariable logistic regression analysis was used to demonstrate independent risk factors for symptomatic prolapse. A total of 5,236 women returned the questionnaire (65.2 %) and the overall prevalence of symptomatic POP was 12.8 %. Vaginal delivery, infant birthweight and current maternal body mass index were the only independent risk factors. The prevalence of POP was more than doubled after vaginal delivery compared with caesarean section [odds ratio (OR) 2.55; 95 % confidence interval (CI) 1.98–3.28], but not increased after emergency caesarean in labour compared with elective caesarean. The infant birthweight-dependent effect was more obvious for mothers with height ≤160 cm and a threshold effect was noted for a birthweight around 4,500 g. The prevalence of urinary incontinence was higher in women with prolapse compared with those without (OR 3.02). Based on this study, 12 caesarean sections need to be performed to avoid 1 case of symptomatic

POP and 8 caesareans to avoid 1 case of either urinary incontinence or prolapse.

The findings of this study expand our knowledge about the complex relationship between pregnancy, delivery and symptomatic prolapse. They may facilitate optimal antenatal counselling about mode of delivery and help patients accurately assess the risks and benefits of each approach in the current climate where there is an increasing demand for elective caesarean sections. The detected relationship between maternal height and birthweight could tailor antenatal counselling for specific groups of pregnant women. The finding that emergency caesarean sections in labour do not increase the risk of POP indicates that the structural damage to the pelvic floor occurs during the second stage of labour when the fetus passes through the levator hiatus. Therefore, strategies for management of second stage should be re-evaluated and prospective studies of different approaches are required to assess long-term outcome with the potential use of levator ani muscle injuries as a short-term end point.

Do urodynamics improve outcome of stress incontinence surgery?

van Leijsen SA, Kluivers KB, Mol BW, Hout J, Milani AL, Roovers JP et al (2013) Value of urodynamics before stress urinary incontinence surgery: a randomized controlled trial. Obstet Gynecol 121:999–1008

This is the latest multicentre RCT that aims to assess if urodynamics affect the outcome of stress incontinence surgery. The current RCT (VUSIS 2) was embedded in a diagnostic cohort study of women with stress-predominant urinary incontinence. A total of 126 women with discordant urodynamic findings were randomised to immediate midurethral sling or individually tailored therapy. Urodynamic findings were considered discordant if urodynamic stress incontinence was absent or if detrusor overactivity, weak flow, small cystometric capacity, raised post-void residual or reduced bladder sensation were present. Alternative options in the individually tailored treatment were anticholinergics, pelvic floor muscle training, bladder retraining, insertion of a pessary, expectant management, intravesical botulinum toxin injections or posterior tibial nerve stimulation. There was no significant difference between the two groups in subjective outcomes, measured with the Urogenital Distress Inventory after 1 year. Objective cure assessed with the stress test and bladder diary and complications were also equal between the two arms of the RCT. In the individually tailored therapy arm most women (92 %) underwent a midurethral sling within the year.

The results of this study support the findings of the recently published ValUE and VUSIS 1 trials regarding the role of preoperative urodynamics in women with uncomplicated demonstrable stress-predominant urinary incontinence. Focusing on the challenging group of women with discordant findings, this study questions further the value of preoperative invasive urodynamic tests. The importance of a careful office evaluation cannot be underestimated if we are hoping to reproduce these results in our daily clinical practice. The fact that almost all participants had midurethral slings, regardless of randomisation, must have biased towards non-inferiority. As the findings of the study are not applicable to women with ‘complicated’ stress incontinence, further research is required to evaluate preoperative urodynamics in these patients.

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