

ABSTRACT

Eija Laurikainen

Tension-free vaginal procedures for female stress urinary incontinence

From the Department of Obstetrics and Gynecology, Turku University Hospital and Turku Postgraduate School of Health Sciences, Faculty of Medicine, University of Turku, Turku, Finland. *Annales Universitatis Turkuensis, Series D, Medica-Odontologica*, tom. 724, ISBN 951-29-3140-0, ISSN 0355-9483. Painosalama Oy, Turku, Finland 2006.

The outcome of patients who were operated on at a day-surgery unit for urinary incontinence with one of several new banding techniques was studied. These techniques have replaced previous, invasive surgical procedures. A number of modifications have been developed of the original TVT-technique (Tension-free Vaginal Tape) which gained rapid and wide-spread popularity soon after its introduction more than a decade ago.

This thesis combines four studies. In the first (Study I), 191 patients operated on at the Turku City Surgical Hospital in 1998–2000 were followed up. The patients did not have preoperative urodynamic examinations, but the patients suffering from mixed urinary incontinence did undergo a urogynecological ultrasound examination. Urodynamic studies were obsolete for patients with pure stress incontinence, since 97 % of patients with this condition were cured of their incontinence. In mixed incontinence, however, urodynamic studies are in order, since only 69 % were continent at follow up.

In the second study the results of the Rosti sling procedure, a modification of the TVT procedure was studied. The Rosti sling was developed by Dr Juhani Rosti at the Salo local hospital. In this retrospective study there were 217 patients. The results were similar as for TVT, but the incidence of postoperative urinary retention was higher. This was balanced off by an economic advantage of the Rosti sling.

The third study (Study III) examined the rate of prolonged urinary retention after TVT and the benefit of dissecting the band if retention emerged. The study was a national postal inquiry. Retention requiring discision of the TVT tape was less common in Finland than what has been reported elsewhere. Following discision, less than half of the patients remained continent.

The fourth study (Study IV) was a randomized, prospective, comparative multicenter study. There were 267 patients who were operated on either by TVT (n=136) or TVT-O[®], a procedure where the band is introduced through the obturator foramen (n=131). The patients' quality of life was also assessed. Both operations were safe and to the benefit of the patients. The results were excellent for both procedures. Of the patients who had undergone TVT, 98.5% were continent and TVT-O[®] 95.4%.

In conclusion, these new mini-invasive procedures are effective and safe for treating female stress incontinence.

Keywords: stress urinary incontinence, surgery, retention, transection, randomized, TVT, TVT-O[®], Rosti sling