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Title (type in CAPITAL LETTERS, leave one blank line before the text) TENSION-FREE VAGINAL TAPE FOR SURGICAL TREATMENT OF FEMALE STRESS URINARY INCONTINENCE
<u>Aims of Study</u> TVT (tension-free vaginal tape) operation has been reported as a new surgical technique based on a series of experimental investigations of female urethral closure mechanism. We prospectively evaluated the safety and efficacy of the TVT procedure for surgical treatment of female stress incontinence.
<u>Methods</u> TVT operation was performed in 195 incontinent women (stress incontinence in 153 and mixed incontinence in 11) with a mean age of 57.1 years ranging from 31 to 82 years. The patients were operated on under local anesthesia. A 60-minute pad test, uroflowmetry, measurement of postvoid residual urine, and urethrocytogram were performed pre- and postoperatively. Symptom and QOL (quality of life) were assessed by using short forms of Ueberossax et al. (Neurourol Urodyn. 14: 131, 1995). The safety of the procedure was evaluated in all patients and the efficacy was assessed in 164 patients followed more than 3 months.
<u>Results</u> Pre-operative 60-minute pad test was 35.0g (0-498). 150 of 195 patients (83.3%) had the episode of incontinence more than once a day, 30 (16.7%) had experienced it a few times a week. 103 (55.7%) put on pads or diapers all day long and 39 (21.1%) put pads every time they go outside. The mean operating time was 45.8 minutes (20-145). 13 women (7.4%) simultaneously underwent hysterectomy and 33 (16.9%) repairs of pelvic floor prolapse. Bleeding was minimal and none necessitated blood transfusion. We found that this surgery that supports the mid-urethra requires little or no tension at all as the same way as the other sling operations do and that water spurt responding to strong coughings was a good indicator when the final adjustment of the tape tension is required. Although this water ejection was observed in the majority of the women (63.2%), those who failed to do so has to be completed based on surgeon's surgical experience. Difficulty in urination or retention occurred in 4 women, but none of them needed to be reoperated on to loose or remove the tape. At the postoperative evaluation carried out 3 months after the surgery, incontinence was cured in 120 of 146 patients (83.3%), minimal only on strong straining in 14 (9.7%), improved in 9 (6.3%) and unchanged in one (0.7%). Postoperatively, maximum flow rate declined from 27.2 to 18.6ml/sec and postvoid residual urine increased from 13.9 to 16.9ml which were not statistically significant. QOL assessed by a questionnaire comprising 13 items showed significant improvement postoperatively, the total score of the questionnaire declining from 16.0 to 2.5 (mean) ($p < 0.05$).
<u>Conclusions</u> Since tension on the tape has to be minimal as with any other sling procedures, one should explain importance of a succession of coughings during surgery and makes a patient practice it prior to surgery. TVT surgery is minimally invasive and surgical outcomes are satisfactory for the correction of stress or mixed urinary incontinence.

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