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TRANSVAGINAL BONE-ANCHORED SLING FOR THE TREATMENT OF STRESS URINARY INCONTINENCE

Aims of Study
It was to evaluate the results and complications of In-Fast transvaginal bone anchoring sling procedure.

Methods
In February 2002, we assessed, at least 1 year postoperatively, 163 women aged 39 to 85 years (mean 64.7 – SD 9.6) with documented genuine SUI who underwent pervaginal bone anchoring sling procedure between April 1997 and December 2000. All patients were evaluated taking into account their medical history, physical examination, 1-hour pad test, multichannels urodynamic measurement, abdominal leak point pressure, translabial ultrasonography to assess bladder neck and urethra hypermobility. All patients were free from neurological diseases, peripheral neuropathies and mixed urge/stress incontinence. A total of 47 (29%) patients had previous hysterectomy and 15 (9%) had anterior and posterior vaginal repair. Moreover 38 (23%) patients had previously one or two failed incontinence surgeries. SUI was due to defect of anatomic support and to ISDin 159 (98%) and 4 (2%) patients, respectively. The subjective assessment of urine leakage was classified, following the Stamey incontinence score. The severity of pelvic relaxation during both resting and straining was classified in three grades, according to modified criteria from Beecham and Baden. The Stamey's score was grade 1 in 11 (6,7%) patients; grade 2 in 133 (81.6%) patients and grade 3 in 19 (11.7%) patients. The surgical technique has been previously described (1). The sling material used was Dacron in 116 (71%) patients, autologous fascia lata or fascia retti in 27 (17%), polypropylene mesh in 16 (10%) and dried cadaveric fascia in 4 (2%).
Postoperative follow-up included an initial visit 30 days after surgery and further visits at 3, 6, 12 months and every year for 5 years. During the visit, patients underwent physical examination and translabial ultrasonography and filled in the self-assessment questionnaire, in accordance with the report by Korman in 1994. After the questionnaire and the physical examination were completed, the patients were stratified into two main groups: (a) cured, perfectly dry patients and patients with minimal and occasional leakage; (b) failed, patients improved but with persistent minimal leakage, unchanged or worse.

Results
A total of 161(99%) patients agreed to complete the patient survey, whereas 2, who had a follow-up of 9 and 22 months documented in the medical records, failed to complete survey. The first patient, perfectly dry, underwent sling removal in another hospital because of vaginal erosion, and the second one, with ISD, was worse. The follow-up ranged from 1 to 47 months (mean 26.4 – SD 12.7) The follow-ups of less than 12 months were due to the dropout of patients who underwent sling removal because of rejection. A total of 70 (43%) patients underwent In-Fast sling procedure alone, whereas 93 (57%) underwent In-Fast in conjunction with simultaneous vaginal surgery (anterior repair in 87 cases, posterior repair in 42 cases, and vaginal hysterectomy in 18 cases), and 1 patient underwent urethrolysis because of fixed urethra. In-Fast procedure has been performed with vaginal incision and as an incisionless procedure in 112 (69%) and 51 (31%) cases, respectively. Intraoperative and postoperative complications were identified in 7 patients: bleeding through the vaginal approach in 2 cases, hematoma of Retzius space in 4 patients, and cutting of the prolene suture at the knot in another case.
The main late complication was vaginal erosion which appeared in 20 patients with synthetic sling (Dacron in 19 cases and Polypropylene mesh in 1 case). In one patient, cleansing and suture of the vaginal erosion enabled a good healing. However, in 19/163 (12%) cases, it was necessary to remove the sling 2 to 33 months after surgery (average 9.6). Two other slings have been removed: one for the penetration of the Prolene suture into the bladder neck and the other for the dislocation of one end of the sling and recurrent SUI, respectively 20 and 13 months after implantation. As far the urine leakage is concerned, 94% (153/163) of patients reported no incontinence while incontinence was persistent in 6% (10/163) patients. The sling procedure failed in all the patients (4/163) with ISD.
The patients age ($p<0.2$), Stamey score of SUI ($p<0.9$), duration of SUI before sling procedure ($p<0.1$), previous incontinence surgery ($p<0.3$), simultaneous related vaginal surgery ($p<0.7$) did not affect the success or failure of In-Fast sling procedure in the cure of SUI.

Conclusions

In-Fast allows high cure rate in patients with urinary incontinence because of a defect of anatomic support, and it is unsuitable when incontinence is due to ISD. It eliminates the major drawback of the pubovaginal slings represented by postoperative obstructed voiding because of excessive force placed on the suspension sutures. The only main complication results from the use of the gelatin-coated Dacron sling that gives vaginal erosion, often necessitating sling removal.

References

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