

WHEN DOES PERINEAL MALE SLING FAIL? REVIEW OF 43 PATIENTS

Aims of Study

Treatment of sphincteric incontinence in men is mainly surgical and proposed underlying mechanism is urethral compression with subsequent improvement in urethral resistance (1). Recently, a novel male sling for treatment of stress urinary incontinence was described (2,3). This involves placement of sling with bone anchoring technique at the level of bulbar urethra. Compared to other treatment options such as periurethral injection of bulking agents or artificial urinary sphincter, the factors contributing to the success or failure of perineal male sling has not been well defined yet. In the present study, we reviewed the early results of perineal male sling surgery in 43 patients and evaluated various factors contributing to the failure of new male sling procedure for stress urinary incontinence (SUI).

Methods

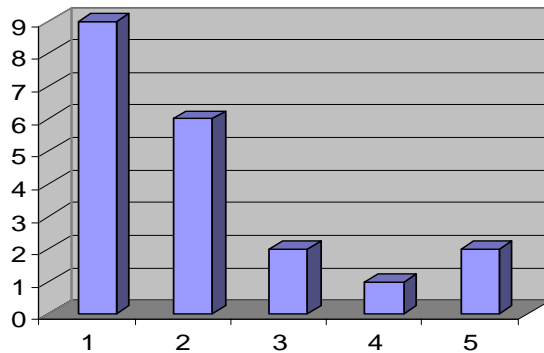
Between May 2001 and February 2003, a total of 43 patients underwent bone-anchored perineal sling procedure utilizing either allograft dermis, synthetic (silicone-coated polypropylene mesh) or composite graft (dermis reinforced with mesh). The patients were given spinal anesthesia and placed in dorsal lithotomy position. A midline incision was made. After perineal dissection periosteum of the descending ramus on each side was exposed and six titanium bone screws were drilled. Three on each side on the descending ramus using the straight InVance bone drill. A 4x7 cm. allograft dermis graft alone or reinforced with fascia lata or silicone mesh was used. One edge of the graft was then anchored to the bone by transferring the # 1 prolene and thus was tied onto the bone. Patients were then asked to cough and the tension was just adjusted until leakage was observed. This distance was marked onto the graft and the graft was then tied onto the contralateral side at the marked site. Post-operatively patients were evaluated by a detailed questionnaire. Patients were improved if they achieved 50% reduction in number of pads used or cured if they had no leakage. All failed patients with a continuing leakage or new-onset urinary leakage were evaluated by questionnaire and urodynamics. The cure and/or improvement rate and failure of the procedure was assessed in each group of patients according to etiology and severity of the disease, type of the material used and previous therapy.

Results

Stress urinary incontinence was found in 40 (93%) patients who had a history of either radical prostatectomy or radiation therapy whereas 3 (7%) patients had spinal cord injury, pelvic trauma or transurethral resection of prostate. Mean follow-up was 10 (3-24) months. There were no intra-operative or post-operative complications related to the surgery. SUI was cured in 24 (56%) and significantly improved in another 9 (21%) patients. The procedure failed in 10 (23%) patients and post-operative urodynamic study revealed SUI with low valsalva leak point pressures. Of the failed patients, 9 underwent sling procedure with allograft dermis alone. Severe incontinence (>4-5 pads/24 hrs) was noted pre-operatively in 6 and two of these had incontinence secondary to spinal cord injury and severe pelvic trauma (Figure 1). Perineal male sling also failed in additionally 2 patients who received external beam radiation therapy for prostate cancer.

Conclusions

Bone anchored perineal sling for treatment of SUI in male patients has recently been popularized and long term results are not available yet. Early results suggest that bone anchored sling procedure is a safe, minimally-invasive and effective treatment alternative in treatment SUI in men (4). In the present study we evaluated the efficacy and success rate of perineal male sling procedure in the era of different etiologies, severity of the incontinence and materials used. In our experience, patients who received allograft dermis alone and not a permanent sling material, have had severe SUI or have received prior radiation for prostate cancer had a poor outcome.



1. dermis alone 2. severe incontinence 3. spinal cord injury
4. severe pelvic trauma 5. external beam radiation therapy

Figure 1. Factors contributing to the failure of male sling in patients with SUI.

References

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