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EFFICACY OF A NEW BONE-ANCHORED PERINEAL MALE SLING IN INTRINSIC SPHINCTER DEFICIENCY

Aims of Study

Stress urinary incontinence (SUI) in men usually occur secondary to anatomical disruption of the urinary sphincter. Sphincteric insufficiency can be a major complication of myelomeningocele, transurethral prostatectomy or radical prostatectomy (1). Patients presenting with SUI are usually treated with an indwelling catheter, external collecting device, penile clamp, injection of bulking material, artificial urinary sphincter and recently described pubourethral or perineal sling (1,2). To our knowledge, we present the largest prospective series of patients to document the intermediate term results in a novel male sling for treatment of SUI.

Methods

Between May 2001 and February 2003, a total of 43 patients underwent bone-anchored perineal sling procedure by placing either allograft material, silicone-coated polypropylene mesh or composite graft. 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 adjusted until no leakage was observed. This distance was marked onto the graft and the graft was then tied onto the contralateral side at the marked site. The patients were evaluated post-operatively with a detailed questionnaire to assess urinary incontinence.

Results

Forty (93%) patients had a history of either radical prostatectomy or radiation therapy for prostate cancer whereas, 3 (7%) had spinal cord injury, pelvic trauma or transurethral resection of prostate as etiologic factors of SUI. All patients underwent perineal male sling procedure with no intraoperative and early post-operative complication. All patients voided spontaneously after removal of Foley catheter. Mean follow-up was 10 (3-24) months. There were no complications except mesh infection in one patient. No patient required analgesics for more than 1 week. Two (9.5%) developed urge incontinence in post-operative period. Ten (23%) patients failed and continued to use the same number of pads whereas, SUI was cured (completely dry) in 24 (56%) and significantly improved (more than 50% reduction in pad usage) in another 9 (21%) patients. Patients with neurological etiology, pelvic trauma and radiation therapy after radical prostatectomy were failed. Additionally, patients in whom the dermal allograft material was used alone, also started to leak. Overall, improvement in incontinence compared to the post-operative period revealed a patient satisfaction rate of 88%. Total cost was 1900 $ excluding the cost of graft material versus 5595$ for artificial urinary sphincter.

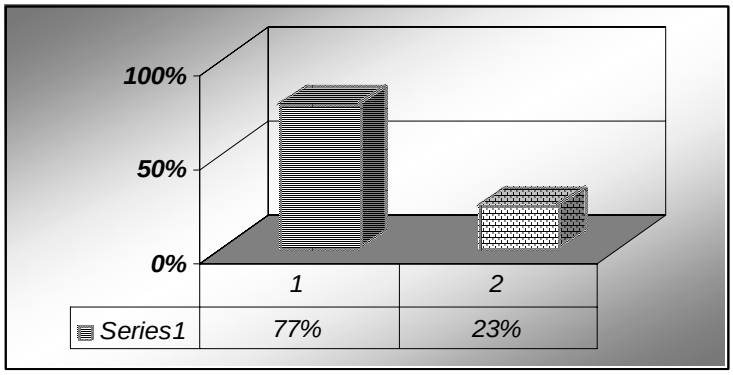

Figure 1. Ratio of completely dry and/or improved patients to failed patients after perineal male sling surgery

Conclusions

Our results with a relatively large series of patients demonstrates that bone anchored male sling is an effective and minimally invasive treatment modality in patients with SUI. This technique provides alternative treatment option in patients with a history of mild to moderate degree of SUI following radical prostatectomy with no additional intervention.

References

1- Comiter CV. The male sling for stress urinary incontinence: a prospective study. J Urol 2002, 167: 597.
2- Migliari R, Pistolesi D, Angelis MD. Polypropylene sling of the bulbar urethra for post-radical prostatectomy incontinence. Eur Urol 2003, 43: 152.