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SALVAGE OPTION FOR TREATMENT OF STRESS URINARY INCONTINENCE AFTER A FAILED SLING OR BLADDER NECK SUSPENSION: THE BONE-ANCHORED SLING

Hypothesis / aims of study

Studies have demonstrated that approximately a third of women remain with stress urinary incontinence (SUI) after undergoing transvaginal sling (TVS) placement or bladder neck suspension (BNS). Management of recurrent SUI after TVS or BNS is difficult. The autologous fascia pubovaginal sling is the gold standard treatment for patients with recurrent or persistent SUI after TVS. Other treatment options include injection of periurethral bulking agents, repeat TVS, spiral sling, and artificial urinary sphincter placement. The bone-anchored sling (BAS) has proven to be a successful treatment for patients with SUI and intrinsic sphincter deficiency with success rates up to 75% (1). We sought to evaluate the success rate of BAS in patients with persistent SUI after TVS placement or BNS.

Study design, materials and methods

A retrospective review of a prospectively collected data of patients undergoing BAS for persistent SUI after TVS or BNS with minimum 1 year follow-up was performed. All patients underwent cystoscopy and urodynamic evaluation prior to surgery. Patients with urinary urgency were treated medically (behavioural modifications, local hormone replacement, and/or anticholinergic medication) to control their urgency prior to undergoing BAS placement. Briefly, the BAS are placed via a transvaginal approach using a soft polypropylene mesh. The mesh is attached via bone-anchors to the dorsal surface of pubic bone using prolene suture. Sling tension is fixed and not dependant on patient post-operative movement or position. Cystoscopy was performed after the bone anchors are placed to evaluate for bladder and urethral injury. Surgical outcomes analyzed were percent improvement in symptoms, satisfaction, level of post-operative SUI, and presence of urge incontinence. Success was defined as less than 1 incontinence episode per week or >70% symptom improvement. Patients are evaluated 6 weeks after surgery and followed yearly thereafter with questionnaires evaluating treatment outcomes described above.

Results

A total of 67 patients underwent placement of BAS for persistent SUI after TVS or BNS, of which 48 had one year follow-up. Of these, 25 had previously undergone TVS and 23 BNS. The overall success rate of BAS as a salvage procedure was 65%. A total of 8 (16%) patients reported to be dry after BAS and 27 (56%) reported to be dry or less than one incontinence episode per week. There was no significant increase in urge urinary incontinence. A total of four patients had vaginal mesh extrusion, all of which were treated successfully with local mesh excision. Two patients had vaginal extrusion and one patient had bladder extrusion of the prolene anchoring suture, which were excised successfully in the operating room. Patients had no change in urine control after mesh or suture removal. One patient developed a pelvic hematoma post-operatively that did not require blood transfusion.

Interpretation of results

The management of patients with SUI after BNS or TVS is difficult. BAS is a good option as a salvage procedure with success rate of 65%. Caution must be taken given the possibility of mesh or prolene stitch extrusion in this re-operative group of patients. Results must be interpreted with caution given retrospective nature of study, small cohort of patients evaluated and lack of post-operative urodynamic evaluation.

Concluding message

The BAS is a reasonable option for treatment of patients with recurrent SUI after TVS or BNS. Further investigation evaluating both symptomatic and urodynamic outcomes and comparing the BNS versus the gold standard autologous fascia pubovaginal sling.

References

1. Am J Obstet Gynecol. 2009 Mar;200(3):345.e1-3

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Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**