The Use of Autologous Rectus Fascia and Polypropylene mesh as a Combined Sling for Treatment of Female Stress Urinary Incontinence
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Introduction

The use of synthetic materials as mid-urethral slings for treatment of stress urinary incontinence (SUI) is associated with a non negligible risk of urethral and/or vaginal erosions. In this study we report the 12-month results after the use of a new transobturator tape which is composed of autologous rectus fascia that is attached to 2 polypropylene meshes on its both sides.

Methods

We included female patients with non recurrent SUI. They were evaluated by Urogenital Distress Inventory-Short Form (UDI-6), Incontinence Impact Questionnaire-Short Form (IIQ-7), 1-hour pad weight test (PWT) and cough stress test (CST). The procedure started with a small Pfannestiel incision to harvest a 1.5x5 cm strip of the patient’s rectus fascia. This isolated strip was sutured to two polyprolene meshes (1.5x10cm), one in each end, to form a 25cm sling (Fig.1). This combined sling was then inserted as a mid urethral sling via the transobturator technique (outside – in) with its middle part (rectus fascia) related to the urethra. The previous assessment was repeated at 6 & 12 months post-operatively (Fig.2).

Results

A total of 26 female patients were included in this study but 2 of them were not available during follow up. At 1 year follow up, 91.7% of patients had a negative CST and 87.5% had PWT less than 1 gm. Also, at that time the score for the UDI-6 had a statistically significant decrease (p <0.001) compared to those of the baseline. No cases of vaginal or urethral erosions were reported. The recorded complications included; temporary urinary retention in one patient (4.17%), dyspareunia in one patient (4.17%), de-novo urge incontinence in two cases (8.33%) and groin and thigh pain in 3 patients (12.5%).

Conclusions

This new technique is an effective procedure for treatment of female SUI on its short term follow up. It has the advantage of both its low cost and less side effects. The most attractive issue of this new technique that there was no incidence of erosion postoperatively by replacing the polypropylene part in direct contact with the delicate urethra and vagina by an autologous rectus fascia strips. However, a longer follow up is needed to test the durability of this technique and a randomized controlled trial with the original tape is also needed before the final conclusion.