643

Yonguc T[1], Bozkurt I H[1], Aydogdu O[1], Yonguc G N[2], Gunlusoy B[1], Sen V[1]
1. *Izmir Bozyaka Training and Research Hospital,* ***2.*** *Dokuz Eylul University, Faculty of Medicine, Department of Anatomy, Izmir*

DOUBLE SLING PROCEDURE FOR THE SURGICAL MANAGEMENT OF STRESS URINARY INCONTINENCE WITH CONCOMITANT ANTERIOR VAGINAL WALL PROLAPSE

Hypothesis / aims of study
To assess the safety, efficacy of double sling procedure (DS) for the surgical management of stress urinary incontinence (SUI) with concomitant anterior wall prolapse (AVWP) and to identify if less synthetic material implantation will decrease the complication rates without decreasing the high cure rates.

Study design, materials and methods
We retrospectively reviewed the women who underwent DS in two institutions from January 2009 to December 2013. In DS, there are two transobturator tapes inserted from two different routes for the surgical management of SUI with concomitant AVWP. POP-Q was used for anatomical evaluation of prolapse. SUI was assessed by cough stress test and ICIQ-SF questionnaire. We accepted that the patient was satisfied if the visual analog scale score was ≥ 80. The severity of urinary incontinence was classified by ICIQ-SF. The women were evaluated at the 3 and 12 months and annually.

Results
The mean follow-up period was 35.4 months (range 12-60). Operative time was 33.2±6.2. The objective cure and subjective success rates of SUI were 87.8 and 93,2 % respectively. The satisfaction from the surgery was also high with 86.5 % rate. The anatomical success in our series was rather high with 96% rate. Our overall complication rate was 12.2 %. No major complication was documented intraoperatively in any patient. Mesh extrusion was not documented in any woman.

Table 1. Patients' characteristics and perioperative findings

n	74
Age, years mean±SD (range)	52.4±9.3 (29-72)
Follow-up time, month mean±SD (range)	35.4±16.6 (12-60)
Parity mean±SD (range)	2.8±1.15 (1-5)
Menopausal state, n (%)	49 (66.2)
BMI, kg/m^2 mean±SD (range)	29.1±2.7 (22-36)
SUI, n(%) / MUI, n(%)	43 (58.1) / 31 (41.9)
Preoperative DOA, n(%)	9 (12.2)
Cystocele+Rectocele, n(%) / Cystocele n(%)	14 (18.9) / 60 (81.1)
Incontinence severity*, n(%)	
Slight	0
Moderate	6 (8.1)
Severe	46 (62.2)
Very severe	22 (29.7)
Operative time	33.2±6.2 (25-52)
Hospital stay	1.1±0.2 (1-2)

Results are given as mean ±SD, standard deviation
SUI, stress urinary incontinence
MUI, mixed urinary incontinence
DO, detrusor overactivity
BMI, body mass index
*, Incontinence severity according to ICIQ-SF score: slight (1-5), moderate (6-12), severe (13-18) and very severe (19-21)

Table 2. Outcomes of double sling procedure at medium-term follow-up (range 12-60)

n	74
Objective cure	65(87.8)
Subjective success	69 (93.2)
Subjective cure	59 (79.7)
Subjective improvement	10 (13.5)
Anatomic success	71 (95.9)
Patient satisfaction	64 (86.5)
Resolution of UUI	12 (38.7)*
De novo UUI	1 (1.3)
Vaginal epithelium laceration	3 (4)
De novo dyspareunia	2 (2.7)
Severe groin and/or leg pain	2 (2.7)
Urinary tract infection	1 (1.3)

Results are given as n (%)
Subjective cure; patients with postoperative ICIQ-SF=0
Subjective improvement; ICIQ-SF score ≤ 12 and visual analog scale (VAS) score ≥ 90
Subjective success; subjective cure and improvement
Objective cure; patients with negative cough stress test (CST)
Patient satisfaction; VAS score ≥ 90
Anatomic success; anterior vaginal wall prolapse ≤ 1 postoperatively
*13 out of 31 women with preoperative mixed urinary incontinence
UUI; urgency urinary incontinence

Table 3. Preoperative and postoperative ICIQ-SF scores and POP-Q stratification for anterior wall prolapse

	Preoperative	Postoperative
ICIQ-SF (mean±SD)	16.2±3.1*	1.9±1.4*
AVWP , n(%)		
Stage 0	0	9 (12.2)†
Stage 1	0	62 (83.8)†
Stage 2	32 (43)	3 (4.0)‡
Stage 3	42 (57)	0

SD, standard deviation
*, p<0.001 (paired sample t test)
†, anatomical success 96% (stage 0+stage 1, 71 women)
‡, anatomical failure
ICIQ-SF, International Consultation on Incontinence Questionnaire Short Form
AVWP, Anterior vaginal wall prolapse

Interpretation of results

In 2004, Rane introduced the Perigee transobturator cystocoele repair system (AMS) for the management of cystocele and concluded that this kit was an effective, minimally invasive, with minimum morbidity in the medium term(1). In an international multicentre prospective study, Palma et al. assessed the efficiency and safety of a monoprosthesis with combined prepubic and transobturator arms (NAZCA TC) for AVWP repair and simultaneous SUI treatment. At a 12-month follow-up, they concluded that monoprosthesis demonstrated both anatomical and functional high success rates with an almost 6% vaginal mesh exposure(2). Previous studies showed that nonabsorbable synthetic mesh use in AVWP surgery is the most effective procedure and decreases the reoperation rates. However when it comes to the safety, the procedures with nonabsorbable synthetic mesh have the worst complication rates compared to all other procedures. Among these complications mesh erosion is the most common one (10.2%)(3). Our outcomes are similar with the previous studies.

Concluding message

This new procedure (DS) is feasible, efficient and safe. Reducing the mesh size did not have a detrimental effect on the outcomes of SUI treatment and simultaneous AVWP repair. On the contrary, the rate of mesh extrusion the most common complication of transvaginal mesh surgery was decreased. We hope this new technique would encourage the innovative surgeons for reducing the mesh size in many other surgeries.

References

1. Rane A, Kannan K, Barry C etal: Prospective study of the Perigee system for the management of cystocoeles--medium-term follow up. Aust N Z J Obstet Gynaecol 2008; 48: 427.
2. Palma P, Riccetto C, Prudente A et al: Monoprosthesis for anterior vaginal prolapse and stress urinary incontinence: midterm results of an international multicentre prospective study. Int Urogynecol J 2011; 22(12): 1535.
3. Deffieux X, de Tayrac R, Huel C, et al. Vaginal mesh erosion after transvaginal repair of cystocele using Gynemesh or Gynemesh-Soft in 138 women: a comparative study. Int Urogynecol J Pelvic Floor Dysfunct 2007; 18: 73.

Disclosures

Funding: NONE **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics not Req'd:** This is aretrospective study and the data were documented from medical records **Helsinki:** Yes **Informed Consent:** Yes