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OUTCOME OF PUBOVAGINAL SLING USING PORCINE SMALL INTESTINE SUBMUCOSA IN THE TREATMENT OF STRESS URINARY INCONTINENCE

Aims of Study

A new sling material derived from porcine small intestinal submucosa (SIS) is now available for surgical treatment of Stress Urinary Incontinence (SUI). At present, the SIS is used for the correction, reinforcement and substitution of soft tissue as well as in urological, gynecological and gastroenterological surgeries. Preclinical tests have revealed biocompatible characteristics of the host and the absence of local and systemic allergic reactions (1). In this study, we report on the early outcomes of the use of SIS for treatment of SUI.

Methods

Since March 2000 fifty women with proven stress incontinence underwent a suburethral sling procedures using the SIS biomaterial as the sling material. The average patient age was 52 years (range: 30 to 77 years). Among the 50 female patients 64% had had some previous surgical treatment for SUI and 44% had some degree cystocele. Valsalva leak point pressure (VLPP) revealed anatomic SUI in 46% (mean VLPP 98cmH2O) and intrinsic sphincter deficiency was diagnosed in 54% (mean VLPP 57cmH2O). The dry SIS biomaterial was soaked in antibiotic solution (15minutes) to hydration prior to use. The surgical protocol involved transvaginal placement of the SIS sling suspended by polypropylene sutures fixed to the rectus fascia.

Results

The mean follow up was 20 months (range 6 to 36 months). Of the 50 patients, 46 (92%) were cured of stress incontinence and two reported improvement. Postoperative urinary retention was observed in five patients (10%). Neither urinary nor wound infection was detected, and no patient developed postoperative urinary irritative symptomatology. There was no evidence of local or systemic reaction to the material in any of the patients.

Table. Demographic data on the 50 patients with pubovaginal sling using the SIS (mean (range) or number (%)).

Variable	Patients
Age (year)	52 (30 – 77)
Parity	(0 – 15)
Concomitant disease	(60%)
Previous anti incontinence operation	(64%)
Menopausal status	
Premenopausal	12 (24%)
menopausal, with estrogen use	10 (20%)
menopausal, without estrogen use	(56%)
Urge symptoms preoperatively	6 (12%)

Conclusions

SIS is a simple, safe and effective procedure. Our early results warrant further evaluation of the SIS as a suburethral sling for use in surgical repair of Stress Urinary Incontinence.

References

1. Lai R, Alexianu M, Badlani G. Favorable results from the porcine small porcine intestinal submucosa (SIS) in pelvic floor surgery. J Endo 2000; 14: supll 1, A64.