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mid-urethral. The Colpo produces a tendency toward an increased pressure transmission at the bladder neck (quad1) and an increase at the mid-urethra; the site of continence for the Colpo is likely to be the bladder neck but mid-urethral pressure changes may also play a part. The TVT decreases peak flow rate. Urge incontinence and voiding difficulties may not be avoided by the TVT despite its mid-urethral site of action. Longer and larger studies are required to fully assess TVT's mechanism of action and impact on bladder function.

References: (1)Br Journ Obstet Gynaecol 1999; 106:345-350 (2)Int Urogynecol J 1996: 7:81-86 (3)Neurorol & Urodyn 1999; 18(4):370-371

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CONNECTIVE TISSUE CHANGES IN PATIENTS WITH GENUINE STRESS INCONTINENCE AND PELVIC FLOOR PROLAPSE

Aim of the study. Special interest has been given to changes in the quantity and quality of the periurethral collagen (1,2) in relation to the development of genuine stress incontinence(GSI) in women. It has been reported that total collagen reduction of the pubocervical fascia is associated with the development of G.S.I(1) and collagen production from the fibroblasts is reduced by 30% in women with GSI (3), but there is very limited information about changes in specific types of collagen in relation to the development of G.S.I. Objective of this study was to determine possible changes in the quantity of type III collagen and changes in the distribution and structure of collagen fibers for the formation of fascial network in women with G.S.I and with pelvic relaxation or not.

Methods. Eighty-six women participated in the study and they were divided in to three groups as follow : 34 patients with G.S.I and pelvic relaxation (group 1), 32 patients with pelvic relaxation but without G.S.I (group 2) and 20 patients with neither pelvic relaxation nor G.S.I (group 3). All the women underwent a complete preoperative urodynamic evaluation. Biopsies were obtained during surgery from the pubocervical fascia. The presence of collagen type III was determined by immunohistochemical technique and the structure and organization of collagen fibers was examined under the microscope using a magnification of 20X. The specimens were examined by two independent histopathologists. Specimens with disagreement between the examiners about the findings were excluded from the study. The Student's test was used for statistical analysis. A $p < 0.05$ was considered statistically significant.

Results. All groups of patients were comparable in respect to age, parity and body mass index. Groups 1 and 2 were also comparable in respect to the degree of pelvic relaxation. Urodynamic studies confirmed the diagnosis of G.S.I.

Collagen type III was significantly reduced ($p < 0.05$) in patients with G.S.I and pelvic relaxation (group 1), compared to patients in groups 2 and 3. Specimens from women without G.S.I (group 2 and group 3) had a similar density of collagen type III (Table I). Also, was noted a breaking of collagen fiber's bundles in association with a more abnormal distribution of collagen fiber's bundles, leaving gaps in the continuity of fascial network of the pubocervical fascia in women with significant prolapse.

Conclusion. In this study, we found that women with G.S.I had less collagen type III around the urethra regardless of the degree of pelvic relaxation. It appears that collagen content of the pubocervical fascia has a significant role in the maintenance of urinary continence but the mechanism by which collagen metabolism is altered remains unknown. Also, it appears that the development of genital prolapse is probably associated with breaking of collagen fibers bundles, but further studies are needed for safe conclusions to be made.

References.

1. Am J Obstet Gynecol 1998; 179: 1511-1514.

2. Acta Obstet Gynecol Scand 1987; 66: 455-457.
3. Obstet Gynecol 1994; 84: 583- 586.

Table I. Findings of collagen type III in the pubocervical fascia of the three groups.

Patients with SUI (N=34)			Patients with prolapse but not GSI (N=32)			Control group (N=20)		
---	+	++	---	+	++	---	+	++
19	7	8	1	9	22	---	3	17

SUI: Stress urinary incontinence .

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PREVENTION OF GENITAL PROLAPSE FOLLOWING BURCH COLPOSUSPENSION – COMPARISON BETWEEN TWO SURGICAL PROCEDURES

Aims of Study

The Burch colposuspension is considered to be one of the most popular and successful procedures treating urinary stress incontinence. Among the most common complications is the formation of post operative pelvic organ anatomical defects (7-22%). Cul-de-sac obliteration to prevent enterocele formation has long been suggested and debated for its effectiveness.

The purpose of this study was to evaluate the efficacy of the cul-de-sac obliteration during Burch Colposuspension to prevent post operatives anatomical defects formation and to compare two different surgical procedures in an attempt to achieve this goal.

Methods

Between 1982 and 1995, 520 patients underwent Burch colposuspension for Urinary Stress Incontinence. All patients have had a preoperative clinical and urodynamic assessment. Post operatively, patients were examined at 3,6,12 months and once a year thereafter. The last examination was during 1998. The mean follow-up was 8.6 years (3-16).

Patients were divided into two groups.

Group A: patients who underwent Burch Colposuspension only.

Group B: patients who have had a concomitant total abdominal hysterectomy and obliteration of the cul-de-sac. In the latter group the cul-de-sac obliteration was performed by two different techniques:

Until 1993 we used the Mosckowitz procedure and since 1993 we obliterated the cul-de-sac by approximation of the sacrouterine ligaments using 3-4 absorbable sutures.

We considered as anatomical defects enterocele formation which was clinically symptomatic and required surgical correction. For patients in group A we also considered uterine prolapse (grade II) and in group B we also considered vault prolapse as anatomical defects. Distal rectocele as a sole defect was not considered in this study.

Results

Out of the 520 patients in the study, 79 patients were omitted for various reasons. The study group comprises 441 patients, 132 patients in group A (Burch only) and 309 patients in group B (cul-de-sac obliteration). The mean age of the entire group was 48.6 years (28-81). Mean parity was 3.2 (1-10) There were no differences between the two groups.