

## PROGNOSTIC ROLE OF INFLAMMATORY DISORDERS IN THE SUCCESS AFTER PELVIC FLOOR SURGERY

### Hypothesis / aims of study

Life expectancy is increasing, and many polymedicated patients are undergoing anti-incontinence surgeries. Given that inflammatory factors are very important in the integration of the synthetic slings with the patient's tissues, we aimed to know the possible influence of autoimmune or chronic inflammatory disorders in the long-term continence rates after mid-urethral transobturator tapes (TOT).

### Study design, materials and methods

Retrospective study of 950 women with stress urinary incontinence who underwent TOT surgery between April 2003 and June 2016. All surgeries were performed by the same surgeon and with the same tape (Contasure KIM®).

The sample was divided in two groups for comparison:

- Group A (n=807): continent patients after surgery;
- Group B (n=143): incontinent patients after surgery.

Variables investigated: Age, medical and surgical background with special interest in autoimmune and chronic inflammatory disorders, physic examination and complementary studies (urine analysis and culture, ultrasound; cystoscopy, urodynamic studies or cistography/urography when needed), results of the ICIQ-SF and SF-36 questionnaires in one, three and 12 months after surgery, and then yearly, average follow-up time.

Statistical analysis: descriptive statistics, ANOVA, Student's t-test, Fisher's exact test.  $p < 0.05$  was considered statistically significant.

### Results

Average age 64.92 years (range 35-88), similar in both groups. Average follow-up time of 110.3 months, range 6-156 months. Table 1 shows the percentage of patients affected with autoimmune/chronic inflammatory disorders per group.

Secondary diagnosis	GA n(%)	GB n(%)	p
Rheumatoid arthritis	15(1.85)	28(19.58)	0.0001
Lupus	8(0.99)	18(12.58)	0.0001
Fibromyalgia	11(1.36)	15(10.48)	0.0001
Sjögren's Syndrome	9(1.11)	21(14.68)	0.0001
Radiation cystitis	5(0.61)	35(24.47)	0.0001
Intestinal cystitis	4(0.49)	26(18.18)	0.0001

### Interpretation of results

Biomaterials are subject to multifactorial problems because of (1) their physical properties (e.g., porosity and degradability), (2) their mechanical properties (e.g., stiffness and strength), or (3) the nature of the patient's immune response to the implanted biomaterials. It is hypothesized that the material induces an acute inflammatory response, which leads to constructive remodelling and material integration, but when an excessive inflammatory reaction is given, patient's tissues and/or the synthetic material may be damaged, leading to a mechanical failure of native tissue erosion.

The results shown in our study may support this theory, having a higher failure rate of the gold standard procedure for stress urinary incontinence in women with autoimmune or chronic inflammatory disorders.

### Concluding message

Mid-urethral transobturator slings achieves very good continence rates. When stratifying by secondary diagnoses, the presence of a chronic inflammatory disorder, local or systemic, seems to be an independent risk factor for surgical failure. A re-adjustable sling may be a better option than a TOT for this group of patients.

### References

1. Biomaterials for Pelvic Floor Reconstructive Surgery: How Can We Do Better? <http://dx.doi.org/10.1155/2015/968087>

### Disclosures

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