

## **INCIDENCE, MANAGEMENT AND RISK FACTORS ASSOCIATED WITH VAGINAL EROSION AFTER SURGICAL CORRECTION OF URINARY INCONTINENCE WITH POLYPROPYLENE TAPES DURING ONE YEAR FOLLOW-UP.**

### Hypothesis / aims of study

The synthetic slings are accepted for the surgical treatment of stress urinary incontinence, but are not free of complications like vaginal mucosa erosion. Some authors published erosion ranging from 0.2 to 22% associated to synthetic slings.<sup>1</sup> Nowadays, the synthetic tape recommended is the polypropylene, macropore, monofilament, corresponding to type I. These characteristics are associated to less possibility of infections. Choice of the safest tape material is important as it is a risk for erosion.

We hypothesise that the uses of polypropylene mesh type I has a low risk of vaginal erosion after surgical treatment of urinary stress incontinence with slings in a one year follow-up and it has a low morbidity.

This study aims to determine the incidence, management and risk factors associated to vaginal erosion after surgical correction of urinary incontinence with polypropylene slings.

### Study design, materials and methods

Prospective study with 260 women admitted for urinary incontinence treatment with sub-mid urethral polypropylene sling, at Urogynecology and Vaginal Surgery Unit, Obstetrics and Gynaecology Department, Clínica Las Condes, Santiago, Chile. The study was between January 2005 and January 2008. One group of 120 women under classic retropubic TVT was observed. The second group of 140 women under TVT-O was observed.

The range of age was 42 and 65 years old, media 54 years old. The BMI was between 23 and 36, media 28. The vaginal parity was between 0 and 5, media 3. The follow-up evaluations were at one week, one month, six months and when completed one year after the operation. In every evaluation the vaginal mucosa was examined for possible erosion. The evaluations included detailed history taking about possible symptoms.

### Results

In the group of retropubic TVT: 1 (1/120, 0.8%) woman presented erosion in the sub-mid urethral mucosa observed in a routinely control at 1 month. The erosion was in the central zone with a size of 3 millimetres. The patient was 57 years old and presented menopause and diabetes mellitus.

In the group of TVT-O: 2 (2/140, 1.4%) women presented erosion in the sub-mid urethral mucosa observed in a routinely control at 1 month. The erosion was in a 60 years old woman in the lateral portion with a size of 2 millimeters. The other woman was 43 years old and presented erosion in the central zone with a size of 3 millimeters. The first patient presented menopause and the second had antecedent of diabetes mellitus.

The 3 women were asymptomatic at the control in a month after surgery and the erosion was a finding. All women have undergone local therapy with oestrogen and not required excision of the mesh or vaginal mucosal suture closure.

### Interpretation of results

In our study the vaginal erosion rate after polypropylene tape procedure was 0.4% (1/260). The risk of erosion significantly not differed between the two types of tapes. Other study with the same transobturator vaginal tape and the same retropubic tension-free vaginal tape observed the same results.<sup>2</sup> All women were asymptomatic but some publications described pain, vaginal discharge, bleeding, recurrent urinary tract infections and/or persistent stress urinary incontinence associated to vaginal erosion. Other publications informed pelvic abscess.

Two of three patients presented diabetes mellitus like risk factor for vaginal erosion. This relation was described in other publications estimating that women with diabetes mellitus were 8.3 times more at risk than women without this pathology for developing vaginal erosion after synthetic sling procedure.<sup>3</sup>

Two patients presented menopause associated to hypoestrogenism. This condition may be associated with thinner and less irrigated vaginal mucosa due hypoestrogenism and represents another risk factor for erosion.

In many publications informed cases in which is necessary the excision of the mesh and suture closure in operating rooms, but probably are cases associated to infection. In our cases not presented clinic infection and were asymptomatic women. Further, the cases were of erosion very small and local oestrogen resolved the erosion.

Not only is important to choose the technique and type of sling when we decided to correct with surgical method the stress urinary incontinence, equally important is choosing the appropriate patient. We must be alert to the occurrence of complications and we must know how solve.

### Concluding message

According our experience vaginal erosion is an infrequent complication in patients with urinary incontinence corrected with polypropylene sub-mid urethral mesh in TVT or TVT-O, in one year follow-up.

Diabetes mellitus and hypoestrogenism are two possible risk factors associated to vaginal erosion in these patients.

More frequently vaginal erosion associated to polypropylene mesh in TVT and TVT-O may be asymptomatic and not required resection or suture closure. Vaginal oestrogen application may be resolution for these cases.

### References

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