

COMPARISON OF LONG-TERM RESULTS ACCORDING TO THE NEED OF PROLONGED BLADDER CATHETERIZATION AFTER ANTI-INCONTINENCE SURGERY

Hypothesis / aims of study

Anti-incontinence surgery placing a tension free mid-urethral tape, is a minimally invasive procedure, and generally complications reported are uncommon. However, women with stress urinary incontinence who undergo this procedure might have intra-operative or postoperative complications, such as bladder injuries, with a reported incidence of 3.5 to 6.6% or voiding dysfunction, which may require prolonged indwelling bladder catheterization. In our study we wanted to compare whether patients requiring prolonged catheterization (7 days or more), have worse postoperative long-term results (complications, recurrences ...) and worse satisfaction after surgery.

Study design, materials and methods

An epidemiological case-control prospective study was developed. The study population consisted entirely of patients attended in the Urogynecology unit of our center, who were remitted from their primary assistance centers, for mixed or stress urinary incontinence. All these patients underwent vaginal surgery placing a tension-free midurethral sling. A retropubic midurethral sling (TVT) was inserted from year 2000 to 2005, and beyond that, transobturator midurethral slings (TVT-O) were placed. All of them were previously interviewed, explored and undertook a urodynamic test before surgery. Clinical controls were performed the 1st and 6th month after the surgery and a year and two years after. Since then, annual telephonic interviews were realized until today. All our patients answered the ICIQ-SF Spanish validated test to measure the life quality in terms of incontinence after the surgery and were asked to answer a subjective question: "How do you feel about surgery: healed, improved, same or worse? ", and all the complications that occurred during the study were recorded. Patients who required postoperative indwelled bladder catheterization longer than seven days or more, were introduced in the case group. In the control group were included the same number of patients with indwelled catheter days count below seven with similar population characteristics in terms of age, body mass index (BMI), clinical symptoms and preoperative urodynamic results. The results were compared between the two groups on the occurrence of late complications, recurrence of urinary incontinence, the ICIQ-SF score, subjective overall satisfaction at 6, 12, 24, 36, 48 and 60 months to assess whether the requirements of bladder catheterization were significantly related to the appearance of complications or to a lower rate of satisfaction.

Results

A total of 188 patients were recruited 94 patients in group I (cases: indwelled bladder catheter 7 or more days) and 94 patients in group II (controls: bladder catheter less than 7 days). Mean days of catheterization and hospital stay in the case group (n = 94) was 12.54 and 2.46 days, respectively, compared to the control group (n = 94), with a mean of 0.79 and 1.65 days respectively. As indicated before mean age, weight, body mass index and technique used (TVT vs TVT-O) were similar in both groups. The percentage of stress urinary incontinence (SUI) and mixed urinary incontinence (MUI) was also similar in both groups: 73.4 and 72.3% of SUI. In the case group 54.4% got placed a TVT sling and 45.6% a TVT-O, in the control group 53.2% and 46.8%, respectively. Nor were there differences between the associated need for surgery (hysterectomy or colpoplastias), or the anesthesia used.

The reasons why bladder catheterization was prolonged in the case group were in a 21.3% (n=20) an intraoperative bladder injury and in a 78.7% (n=74) urinary retention with voiding dysfunction in the immediate postoperative period. We found no differences in late complications in both groups in terms of chronic pelvic pain (2.1% vs 2.1%) and mesh extrusion (6.4% vs 5.3%), assuming that significance $p < 0.05$. But repeated cystitis (8.5% vs 4.3%) were significantly higher in the case group. ($p < 0.05$). An sling release had to be performed in 12.8% of patients in group I (n = 12) vs. 1.1% (n = 1) in group II, for the indication of urinary retention and bladder voiding dysfunction, being those differences statistically significant. ($p < 0.05$). In terms of recurrent stress urinary incontinence (SUI), appearance of urinary urgency symptoms (UUI), mixed urinary incontinence (MUI) and subjective feeling after de surgery at 12, 24, 36, 48 and 60 months, are summarized it in this table (1)

	Case Group 12 m	Control Group 12 m.	Case Group 24m	Control Group 24m	Case Group 36 m	Control Group 36 m.	Case Group 48 m	Control group 48 m	Case Control 60 m	Control Group 60 m
Healed	74.5%	73.4%	79.8%	67%	78.7%	66%	76.6%	73.4%	70.2%	69.1%
Improved	21.2%	20.2%	17%	25.5%	17%	28.7%	18.1%	24.5%	19.1%	19.1%
Same	2.2%	5.3%	2.1%	3.2%	3.2%	4.3%	4.3%	2.1%	5.3%	7.4%
Worse	1.1%	1.1%	1.1%	3.2%	1.1%	1.1%	1.1%	0%	5.3%	4.3%
No UI	71.3%	66%	74.5%	64.9%	79.9%	64.9%	77.7%	73.4%	74.5%	69.1%
SUI	2.1%	6.4%	4.3%	5.3%	2.1%	6.4%	5.3%	3.2%	5.3%	5.3%
UUI	22.3%	23.4%	18.1%	22.3%	14.9%	22.3%	12.8%	19.1%	10.6%	17%
MUI	4.3%	4.3%	3.2%	7.4%	3.2%	6.4%	4.3%	4.3%	9.6%	8.5%

Mean ICIQ-SF at 6 months was (4.34 ± 6.43) in group I and (5.06 ± 6.27) in group II. 72% of all patients have an ICIQ-SF score equal or below 7.

Interpretation of results

The study designed obtained two comparable groups in terms of age, BMI, type of incontinence, anesthesia, prolapse associated surgery and surgical technique performed (TVT-O, TVT). The main cause of prolonged postoperative catheterization was urinary retention secondary to voiding dysfunction in the immediate postoperative period. This event increased the urinary tract infections in this phase. While the band was released in 12 cases in group I versus a single case in the control group, long-term complications and patient's satisfaction was similar in both groups.

Concluding message

The results indicate that we can reassure our patients if postoperative catheterization is required, because patient's satisfaction for anti-incontinence surgery procedures with tension free midurethral sling is very acceptable, and recurrence of stress incontinence at 6, 12, 36, 48 and 60 months uncommon. Although we also need to warn that in some cases the sling release is required.

Disclosures

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