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Bouffier B[1]
1. *Polyclinique de Franche Comté*

STRESS URINARY INCONTINENCE: WHY AND HOW SHORTEN THE SLING? RESULTS OF DIVA MINISLING WITH 5 YEARS FOLLOW UP

Hypothesis / aims of study

In front of a swing, the four questions of Dad is too tight, too loose, well symmetrical and especially well secured? In front of the sling, we have the same problematic and potential complications

	TVT (in %)	**TOT** (in %)	**DIVA** (in %)
Bleeding/Haemorrhage	3,75	8,5	0
Post op probing	8,75	3,7	0
Intermittent Catheterising	2,5	1,2	0
Vaginal Perforation	0	4,8	3,11
Bladder Perforation	0,5	0,2	1,24 (2/161)
De novo urgency	11 (3 years)	18,8 (3 years)	18,18 (**5** years)
Diva and TVT/TOT Update by the subcommittee of Urogynaecology, approved by the Executive Committee of The Society of Obstetricians and Gynaecologists of Canada SOGC *J Obstet Gynaecol Can, vol. 30, n° 8, 2008, p. 734–740* and DIVA results			

Why shorten the sling? Primum non nocere: by removing the needles, the aim is to:

- decrease the risks of perforations, wounds, pain
- by avoiding general anaesthesia, hospitalisation, expenses

What is the schedule of conditions of a miniaturised sling?

- Suppress the urethra'mobility
- whatever the position at rest
- adjusting the sling according to anatomical and urodynamics conditions
- anchoring its final position
- all the more its retraction will be weak
- and being able to take easily an over or under correction

how to shorten the sling? By cutting it! Suppress the risks with about 20 to 30% of failures because:

- If it is simply adjusted, maintenance of support is insufficient,
- if it is strongly anchored, adjustment cannot be easily made
- If adjusting 2 half slings, it is difficult to join under urethra,

So, to combine anchoring and adjustment, it is easy to use 2 lateral umbrellas + 1 median minisling = prosthesis in 3 parts,
In this case, it is possible to choice:

- Anchoring in V or U shape (TVT or TOT)
- tension adjustment to anatomical and urodynamics findings,
- And a possible correction within 2 weeks,

Study design, materials and methods

Prospective study between May 2005 and February 2008: 219 patients,161 patients out of 219 are assessable (74%), 46 patients are lost sight, 8 patients are not assessable because of health troubles, 4 patients are dead (total 26%).
The evaluation has been made by means of a questionnaire and sometimes completed by a phone call to the patient. No medical check up, especially urodynamic has been done without a medical indication.
Age: 161 patients are between 29 and 85 years old, (average age 54.32 years old).
- Initial stress urinary incontinence: 110 patients are from 29 to 85 years old (57.78)
- Mixed incontinence: 51 patients are from 40 to 79 years old (56.35 years old)

35 patients had eventful postoperative recoveries, aged from 33 to 76 years old, (Average 56.06).
Medical History: 12 patients had had previous incontinence cures and were aged from 44 to 75 years old (58.83)

Results

The success grade is of 126/161 patients (78.26%) among whom:
90 have no more urinary symptom 58.38%
36 have no more stress urinary incontinence but persistent OAB:22.36%
35 patients 21,74%) had not had the attended results: 7 complications and 28 failures,

Pure stress urinary incontinence: 110 patients
Excellent result 73/110 , 66.36%
Good control of the stress urinary incontinence but OAB: 20 patients (18.18%)
Various troubles: 17 patients (15.45%)

Mixed incontinence: 51 patients

Complete cure: 17 patients (33.33%)
Persistence of an overactive bladder: 16 (31.37%)
Troubles: 18 patients (35.29%)

Patients who had history of surgery for incontinence: 12 patients (7.45%) 6 pure stress urinary incontinence, 6 mixed incontinence.
Excellent result: 3 (25%)
Persistence of irritating signs: 4 (33.33%)
Failures: 5 (41.66%)

Complications 7 patients (4.34%)

- Protrusion: 5 patients 3.11%
  2 had been re operated with success
  2 still had stress urinary incontinence
  1 patient is not assessable
- Bladder stones: 2 patients (1.24%) have been removed unimportant for the urinary continence,

Failure: 28 patients (17.39%) of whom 15 have been re operated (7 DIVA and 8 TOT)
1/15 has been better
1/15 is not assessable
13/15 have no more stress urinary incontinence after the second surgery.

Definitive failures are then 14+2-16 patients, so 9.93%, 2 patients are not assessable, 17 patients have had a second operation with a good control on the stress urinary incontinence.

Interpretation of results

None of these patients bled or had neuralgia. All these surgeries are realised in ambulatory. When there is no problem with the anatomic access and the psychological profile of the patient, the anaesthesia can then be simply local. The patient leaves after a bladder scan control, with a residue which must be inferior to 150cc.

Concluding message

The traditional MUS provides excellent long-term results and the potential benefit of mini-slings is the reduction of adverse events (less pain, fast return to normal activity, avoidance of organ injuries),the trials needed are equivalence studies or at least noninferiority studies, which require high numbers of patients. In terms of cost effectiveness and aging of population, in all countries, mini-slings is probably a legitimate new option to treat female stress urinary incontinence.

References

1. Bouffier B, le dispositif intra-vaginal auto statique DIVA, pour le traitement ambulatoire de l'incontinence urinaire d'effort : technique et résultats préliminaires, , Prog, Urol, 17(5):983-6

Disclosures

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