**Guidelines**

# Diagnosis and management of adult female stress urinary incontinence. Summary of the guidelines for clinical practice from the French College of Gynaecologists and Obstetricians (CNGOF)

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*Abstract:* During the thirty third French College of Gynaecologists and Obstetricians (CNGOF) meeting, guidelines for good clinical practice (RPC) defined by the French High Authority for Health (HAS) were exposed about diagnosis and management of adult female urinary incontinence without any neurological pathology and, particularly with stress urinary incontinence. Guidelines had been established by a multidisciplinary committee's work, directed by B Jacquetin, X Fritel, and A Fauconnier.[1] Methods, texts by the expert authors, synthesis of recommendations have already been published in French in a special number of the CNGOF journal. The intention of the French College of Gynaecologists and Obstetricians (CNGOF) was to improve previous recommandations, which had already been drawn up by several scientific societies, and by this way, to be complementary to these previous undertakings. This article is a summary of the French recommandations, and its aim is to give readers a clinical approach, and help them in their current and usual practices.

*Key words*: Urinary incontinence, Stress urinary incontinence, TVT, TOT, Guidelines, Raccomandations

## DEFINITIONS OF URINARY INCONTINENCE

Stress Urinary Incontinence (SUI) describes the complaint of involuntary urinary leakages during exertions, coughing or sneezing. It is divided into two groups: intrinsic sphincteric deficiency, or increased urethral mobility.[2]

Urge urinary incontinence (UUI or overactive bladder) is involuntary loss of urine, preceded or accompanied by a strong desire to void.

Mixed urinary incontinence (MUI) is the association in variable proportions of SUI and UUI.

## ASSESSMENT OF FEMALE URINARY INCONTINENCE

### *Clinical assessment of female urinary incontinence*[3]

During examinations, you have to precise several points (symptoms) to try defining urinary incontinence type (even if there is not always a correspondence between urinary symptoms and real diagnosis), and checking severity of it:

- Circumstances, frequency, and severity of leakages,
- Urinary symptoms questionnaires: USP (urinary symptom profile), UDI-6 (Urogenital distress inventory-6), ICIQ (international consultation on incontinence questionnaire), MHU (mesure du handicap urinaire)…
- A 3-days bladder diary,
- Quality of Life (QOL) questionnaires, such as general ones (SF 36…), or specific ones (IIQ, Contilife, Ditrovie, …)
- pad-test

In case of UUI (urge incontinence, nocturia, frequency), a bladder diary is recommended. It is not specified in this guidelines but that is probably not necessary to precise that an urinary tract infection must be eliminated as first line.

In case of SUI, several facts are pointed:

- Cough test proves SUI. It Shows loss of urines and confirm SUI. It is recommended before all type of SUI surgery. If the test is negative, you can repeat it particularly in an up-standing position.
- Urethral mobility can be assessed by examination, observation, sub urethral manoeuvers, and Q-Tip test. The best method to check urethral mobility has not yet been established.
- Post-void residual urines (less than 50 ml) and functional bladder capacity measurements (up to 400 ml) are performed during urodynamic investigations.

### *Urodynamic investigations (UDI)*

UDI includes a uroflowmetry with post-void residual urine measurement, a cystometry with detrusor pressure flow study, and an urethral profile including Maximal Closure Urethral Pressure (MCUP) and Valsalva Leak Point Pressure (VLPP) measurements.[4]

UDI's indications are:

- all urinary incontinences before surgical treatment,
- all recurrent urinary incontinence,
- all POP previous surgical treatment's failures, in association with urinary incontinence.

UDI prescription is not needed before pelvic floor rehabilitation for urinary incontinence management.

In case of pure SUI (without urge symptoms), UDI is not necessary before surgery if clinical assessment is complete (standardised questionnaire, cough test, bladder diary, establishment of post-void residual volume) and with concordant results.

A low pre-operative flow rate (measured during uroflowmetry) is associated with a higher risk of postoperative voiding dysfunction (after sub urethral tape placement).

Urinary sphincter deficiency (defined with a decreased MCUP or VLPP during UDI) is not a decisive prognostic factor for the result of a sub-urethral tape procedure.

### *Others investigations?*

Others investigations are not recommended, with these guidelines, to improve your diagnosis or prior to perform a SUI surgery. Therefore, is there any place for ultrasound, and particularly bladder exam with ultrasound, to verify its normality (lithiasis, polyps…), in case of UUI. We probably have to remain that ultrasound can be usefull for a few cases, and preoperatively. Furthermore, MRI and cystography are not needed for urinary incontinence assessment.

## HOW TO TREAT A FEMALE SUI?

### *Conservative treatment of female SUI*

- Treatment of female SUI with lower urinary tract rehabilitation.

Pelvic floor muscle training (PFMT) is recommended first to treat SUI or MUI (PFMT seems to give better results than vaginal electrostimulation). Bladder training is

recommended first in cases of UUI, or MUI with predominant urge symptoms.

- Oestrogen.

Currently, studies don't allow us to establish an optimum method of administration, dosage and type of oestrogen for prevention or treatment of urinary incontinence. Vaginal oestrogen treatment improves urge incontinence and frequency. Oral oestrogen treatment is not recommended for treatment or prevention of SUI.[5]

Vaginal oestrogen treatment can be used in postmenopausal women to improve urge incontinence or frequency.

- Duloxetine.

Objective data (24-hours pad-tests) don't demonstrate any superiority for duloxetine in comparison with placebo. By this way, in France, duloxetine is not recommended at first line.

- Hygiene and dietary measures.

For overweight patients, loss of weight improves urinary incontinence, and dietary measures as well as physical exercices can be proposed.

*Surgical treatment at first line for female SUI*

Procedures

Among many surgical procedures described to treat SUI, sub-urethral tape (retropubic or transobturator route) is the technique recommended at first line due to the easier and shorter postoperative course than Burch colposuspension. It is performed under local, locoregional or general anaesthesia. It can be placed on a one-day surgery or a traditional hospitalisation (depending on patient's and surgeon's preferences). And postoperative course is less expensive with sub-urethral tapes compared with colposuspensions by laparotomy or laparoscopy.[6]

Concerning sub urethral tapes :

- ascending retropubic route gives better results in terms of continence than transobturator route in case of urinary sphincter deficiency,
- transobturator routes from inside to outside or from outside to inside give similar results,
- concerning sub-urethral tape procedures, both retropubic and transobturator routes give advantages, and it does not allow us to recommend a preferred route,
- Place of mini-slings (in order to treat SUI) is not established because of the absence of any comparative studies,
- Urinary sphincter deficiency is not a contra-indication for sub-urethral tape surgery.

What about risks?

The French college (CNGOF) offers (on line) an information letter for patients undergoing a SUI surgery.[7]

Main intra-operative complications of sub urethral tapes are:

- Urinary tract injuries,
- vaginal sulcus tract injuries, (greater risk of vaginal perforation with transobturator route, particularly in case of passage from outside to inside compared with inside to outside route)
- bowel injuries,
- bladder injuries. (frequency of bladder injury is higher with retropubic than transobturator route)

Main postoperative complications of suburethral tapes are:

- urinary retention,
- urinary tract infection,
- urge incontinence,
- pain,
- vaginal, bladder or urethral erosion (erosion rates are greater with transobturator route than retropubic route).

Postoperatively, it is recommended to assess the quality of voiding function in order to screen eventual bladder retention. (urinary post-void residual measurements)

*Surgical treatment at second line for female SUI*

These French recommandations don't give readers any explanations about recurrent SUI treatment, or complex SUI. In fact, in our practice, it can be a second sub urethral tape placement, an adjustable continence therapy next to the bladder neck (ACT, manufactured and disbributed by AMS®), trans or peri-urethral injections, artificial urinary sphincter, which are, for most of these procedures, intrinsic sphincter deficiency treatments.

*Surgical treatment for UUI*

These guidelines don't treat UUI surgical treatments and their indications (botulic toxin, sacral nerve neuromodulation).

## PARTICULAR CIRCUMSTANCES

*Urinary incontinence during or after pregnancy*

Events of vaginal childbirth have no impact on the appearance or persistence of urinary incontinence during the postnatal period or later.[8]

At long term, birth by caesarian section doesn't seem to reduce the risk of SUI, and so it is not a good way to prevent postnatal urinary incontinence.

Pregnant women who already underwent a sub-urethral tape placement, frequency of postnatal urinary incontinence is not significantly reduced with a birth performed by caesarean section.

Postnatal perineal rehabilitation including PFMT with a therapist (midwife or physiotherapist) decreases prevalence of urinary incontinence at short term (one year after birth) compared with councils on selfmade pelvic floor exercises. However, at long term, efficacy of this postpartum rehabilitation is not established.

Pelvic floor rehabilitation during pregnancy improves urinary incontinence during pregnancy, and until 3 months in postpartum time. But, it doesn't appear to treat it with a long drop, at long term.

During pregnancy or immediate postnatal time, the first treatment to perform, in order to treat a SUI, is pelvic floor rehabilitation (PFMT), and so there is no place for other medical or surgical treatment at first line.

*Urinary incontinence in elderly women*

Before deciding any treatment in elderly women, it is recommended to screen for urinary tract infection (using a strip test), to make a bladder diary, to measure post-void urinary residual volume, and to search after triggering factors (such as confusion syndrome, polymedication, excessive diuresis, reduced mobility or terminal constipation).[9]

It is recommended to search after main vulnerability signs too: age over 85, polymedication, deteriorated cognitive functions, depression, undernutrition, neurosensorial problems, postural instability, lack of physical exercise, loss of independence, and social isolation. Elderly women who are heavily dependent from the cognitive and/or physical point of view should be managed by nursing methods: programmed voids, physical mobilisation and activity, use of suitable palliatives, regulation of bowel function.

Anticholinergics are effective for urge incontinence or MUI in women aged over 65. Anticholinergics may cause cognitive deterioration in elderly patients who did not suffer from it before. Prescription of an anticholinergic in an elderly woman must be monitored about appearance of deterioration in brain functions, constipation, urinary voiding dysfunction, or restricted food intake.

*Urinary incontinence and genital prolapse*

Genital prolapse may be associated with SUI, urge incontinence, and obstructive urinary symptoms. Urge incontinence or obstruction symptoms disappear in half of cases as soon as prolapse is cured.

Prolapse may occur SUI from 20% to 70% of cases according studies recorded. In case of genital prolapse without SUI, POP's correction with pessary reveals lesser rates of subsequent SUI, than with a speculum. Pessary test had also been used to predict postoperative continence result of prolapse surgery. But, the predictive value of the pessary test used in this cases is unclear, and it is not recommended to use it systematically.[10]

In order to find out an associated SUI before POP repair treatment, cough test is recommended and allow surgeons to identify patients who could need an associated urinary tract procedure during the same time of surgery. In this case, suburethral tape placement, during the same time of POP repair by the vaginal route, reduces the risk of postoperative SUI. In other cases, (no symptomatic or no occult SUI), there is no indication for a surgical procedure to prevent incontinence.

In case of genital prolapse surgery in a woman who also presents symptomatic or occult stress urinary incontinence, associate surgical procedure for continence is a decision depending of SUI severity, risk factors, technique chosen and potential undesirable effects.

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