Turkish Continence Society
ICS Recognised Urodynamics Certification Course

The Standardisation of Terminology of Lower Urinary Tract Function

Dr. Alkan Çubuk

2003
KONTİNANS DERNEĞİ

ICS

ICS STANDARDS 2020 - 2021

The Standardisation of Terminology of Lower Urinary Tract Function

1. LOWER URINARY TRACT SYMPTOMS (LUTS)

- Symptoms are the subjective indicator of a disease or change in condition as perceived by the patient, carer, or partner and may lead him/her to seek help from health care professionals.

- Symptoms may either be volunteered or described during the patient interview.
- Complaint: The description of the symptom
- Main (Chief) Complaint: The symptom that a patient states as the main reason for seeking medical advice. The degree of "bother (worry, concern)" for other symptoms can be variable

- In general, LUTS cannot be used to make a definitive diagnosis.

- LUTS can also indicate pathologies other than lower urinary tract dysfunction, such as urinary infection.

2. SIGNS SUGGESTIVE OF LOWER URINARY TRACT DYSFUNCTION (LUTD)

- Signs are observed by the physician including simple means, to verify symptoms and quantify them.

- For example, a classical sign is the observation of leakage on coughing.

- Observations from frequency volume chat, pad tests, validated symptoms, and quality of life questionnaires are examples of other instruments that can be used to verify and quantify symptoms.

3. URODYNAMIC OBSERVATIONS

- Urodynamic observations are observations made during urodynamic studies.

- Urodynamic investigations generally involve an individual attending with a comfortably full bladder for free (no catheter) uroflowmetry and post-void residual (PVR) measurement prior to filling cystometry and pressure-flow study.

- For example, an involuntary detrusor contraction (detrusor overactivity) is a urodynamic observation.

- In general, a urodynamic observation may have a number of possible underlying causes and does not represent a definitive diagnosis of a disease or condition and may occur with a variety of symptoms and signs, or in the absence of any symptoms or signs.

4. CONDITIONS

- Conditions are defined by the presence of urodynamic observations associated with characteristic symptoms or signs and/or non-urodynamic evidence of relevant pathological processes.

1. LOWER URINARY TRACT SYMPTOMS (LUTS)

- LUTS are divided into three groups, storage, voiding, and post micturition symptoms.

- **Storage Symptoms:** Lower urinary tract symptoms occurring during the bladder storage phase
- **Increased urinary frequency:** Complaint that voiding occurs more frequently than deemed normal by the individual
- **Increased daytime urinary frequency**: Complaint that voiding occurs more frequently during waking hours than previously deemed normal by the individual. This term is equivalent to pollakiuria used in many countries.

- ***Nocturia*** is the complaint that the individual has to wake at night one or more times to void.
- **Polyuria (global symptom):** Complaint that the urine excretion volume over 24 h is noticeably larger than the previous experience.
- ***Urgency*** is the complaint of a sudden compelling desire to pass urine, which is difficult to defer.

- **Urinary incontinence** is the complaint of any involuntary leakage of urine.

✓ ***Stress urinary incontinence*** is the complaint of involuntary leakage on effort or exertion or on sneezing or coughing.

✓ ***Urge urinary incontinence*** is the complaint of involuntary leakage accompanied by or immediately preceded by urgency.

✓ ***Mixed urinary incontinence*** is the complaint of involuntary leakage associated with urgency and also with exertion, effort, sneezing, or coughing.

- **Enuresis:** Complaint of intermittent (noncontinuous) incontinence that occurs during periods of sleep.

✓ If it is used to denote incontinence during sleep, it should always be qualified with the adjective ‘’nocturnal''.

- ***Nocturnal enuresis*** is the complaint of loss of urine occurring during sleep.

- **Continuous urinary incontinence:** Complaint of continuous involuntary loss of urine.

- ***Other types of urinary incontinence*** may be situational, for example the report of incontinence during sexual intercourse, or giggle incontinence.

Bladder Sensation

- Bladder sensation can be defined, during history taking, by six categories.

Normal: the individual is aware of bladder filling and increasing sensation up to a strong desire to void**.**

Increased: the individual feels an early and persistent desire to void.

Urgency: Complaint of a sudden, compelling desire to pass urine which is difficult to defer

Reduced: Complaint that the sensation of bladder filling is less intense or occurs later in filling than previously experienced

Absent: the individual reports no sensation of bladder filling or desire to void.

Non-specific: the individual reports no specific bladder sensation, but may perceive bladder filling as abdominal fullness, vegetative symptoms, or spasticity.

Bladder Sensation During Filling Cystometry

- ***Normal bladder sensation*** can be judged by three defined points noted during filling cystometry and evaluated in relation to the bladder volume at that moment and in relation to the patient's symptomatic complaints.

- ***The first sensation of bladder filling*** is the feeling the patient has, during filling cystometry, when he/she first becomes aware of the bladder filling.

- ***The first desire to void*** is defined as the feeling, during filling cystometry, that would lead the patient to pass urine at the next convenient moment, but voiding can be delayed if necessary.

- **Normal desire to void**: The feeling that leads the individual to pass urine at the next convenient moment, but voiding can be delayed if necessary

- ***Strong desire to void*** this is defined, during filling cystometry, as a persistent desire to void without the fear of leakage.

- ***Increased bladder sensation*** is defined, during filling cystometry, as an early first sensation or bladder filling (or an early desire to void) and/or an early strong desire to void, which occurs at low bladder volume and which persists.

- **Pain:** the complaint of pain during filling cystometry is abnormal. Its site, character and duration should be noted.

- ***Reduced bladder sensation*** is defined, during filling cystometry, as diminished sensation throughout bladder filling.

- ***Absent bladder sensation*** means that, during filling cystometry, the individual has no bladder sensation.

Bladder oversensitivity –Increased bladder sensation during bladder filling with: (NEW – male)
- earlier first desire to void;
- earlier strong desire to void, which occurs at low bladder volume;
- lower maximum cystometric bladder capacity
- no abnormal increases in detrusor pressure

- ***Non-specific bladder sensations***, during filling cystometry, may make the individual aware of bladder filling, for example, abdominal fullness or vegetative symptoms.

- **Urgency,** during filling cystometry, is a sudden compelling desire to void.

- ***The vesical/urethral sensory threshold***, is defined as the least current which consistently produces a sensation perceived by the subject during stimulation at the site under investigation.

Voiding Symptoms

➢***Voiding symptoms*** are experienced Lower urinary tract symptoms during the voiding phase (experienced during micturition).

✓***Slow stream*** is reported by the individual as his or her perception of reduced urine flow, usually compared to previous performance or in comparison to others.

✓**Spraying (splitting) of urinary stream**: Complaint that the urine passage is a spray or split rather than a single directional stream

✓**Paruresis ("bashful" or "shy bladder"):** Complaint of the inability to initiate voiding in public (i.e. voiding in the presence of other persons) despite there being no difficulty in private

✓***Intermittent stream (Intermittency)*** is the term used Intermittent stream (Intermittency) is the term used when the individual describes urine flow, which stops and starts, on one or more occasions, during micturition.

✓**Hesitancy:** Complaint of a delay in initiating voiding (when the individual is ready to pass urine).

✓**Stranguria:** Complaint of voiding which is slow, difficult and spasmodic (at times "drop by drop"), usually associated with pain

✓**Straining to void:** Complaint of the need to make an intensive effort to either initiate, maintain or improve voiding or the urinary stream.

✓**Terminal dribbling:** Complaint that during the final part of voiding there is noticeable slowing of the flow to drops or a trickling stream.

Post Micturition Symptoms

- **Postvoiding Symptom:** Lower urinary tract symptom experienced after voiding has ceased.
- **Feeling of incomplete (bladder) emptying**: Complaint that the bladder does not feel empty after voiding has ceased.
- Need to immediately re-void ("Encore" or "Double" voiding): Complaint that further voiding is necessary soon after passing urine (cessation of flow).
- **Post-voiding incontinence:** Complaint of a further involuntary passage (incontinence) of urine or dribbling following the completion of voiding
- **Post-micturition urgency:** Complaint of persistent urgency post-voiding.

Symptom Syndromes Suggestive of Lower Urinary Tract Dysfunction

➢ ***Urgency,*** with or without urge incontinence, usually with frequency and nocturia, can be described as the overactive bladder syndrome, urge syndrome or urgency frequency syndrome.

✓These symptom combinations are suggestive of urodynamically demonstrable detrusor overactivity, but can be due to other forms of urethro-vesical dysfunction.

✓ These terms can be used if there is no proven infection or other obvious pathology.

➢ ***LUTS suggestive of bladder outlet obstruction*** is a term used when a man complaints predominately of voiding symptoms in the absence of infection or obvious pathology other than possible causes of outlet obstruction.

2. SIGNS SUGGESTIVE OF LOWER URINARY TRACT DYSFUNCTION (LUTD)

➢ ***Measuring the Frequency, Severity and Impact of Lower Urinary Tract Symptoms***

✓ Asking the patient to record micturitions and symptoms for a period of days provides invaluable information.

✓ The recording of micturition events can be in three main forms.

Micturition time chart: this records only the times of micturitions, day and night, for at least 24 hours.

Frequency volüme chart (FVC): this records the volumes voided as well as the time of each micturition, day and night, for at least 24 hours.

Bladder diary*:* this records the times of micturitions and voided volumes, incontinence episodes, pad usage and other information such as fluid intake, the degree of urgency and the degree of incontinence.

➢ The following measurements can be abstracted from frequency volume charts and bladder diaries

✓ ***Daytime frequency*** is the number of voids recorded during waking hours and includes the last void before sleep and the first void after waking and rising in the morning.

✓***Nocturia*** is the number of voids recorded during a night's sleep: each void is preceded and followed by sleep.

✓**24-hour (urinary) frequency:** Total number of daytime and night-time voids during a specified 24-hour period.

✓**24-hour urine volume**: 18 Summation of all urine volumes during a specified 24 h period. The first void after rising is discarded and the 24-hour period begins at the time of the next void and is completed by including the first void, after rising, the following day.

✓ ***Polyuria*** is defined as the measured production of more than 2.8 liters of urine in 24 hours in adults. It may be useful to look at output over shorter time frames.

✓ ***Nocturnal urine volüme*** is defined as the total volume of urine passed between the time the individual goes to bed with the intention of sleeping and the time of waking with the intention of rising.

✓**Nocturnal (night-time) polyuria:** Increased proportional production of urine during the night-time compared with the 24 h urine volume. Nocturnal polyuria index (NPi) is most commonly used definition (Nighttime urine volume/24 h urine volume) × 100%.

✓**Maximum voided volume:** Highest voided volume recorded during the assessment period. This usually equals bladder capacity

Physical Examination

- Physical examination is essential in the assessment of all patients with lower urinary tract dysfunction.

✓ It should include General (visual) observations, abdominal, pelvic, perineal and a focussed neurological examination.

✓For patients with possible neurogenic lower urinary tract dysfunction, a more extensive neurological examination is needed.

Abdominal: The bladder may be felt by abdominal palpation or by suprapubic percussion. Pressure suprapubically or during bimanual vaginal examination may induce a desire to pass urine.

Perineal/genital inspection allows the description of the skin, for example the presence of atrophy or excoriation, any abnormal anatomical features and the observation of incontinence.

Vaginal examination allows the description of observed and palpable anatomical abnormalities and the assessment of pelvic floor muscle function, as described in the ICS report on Pelvic Organ Prolapse.

Pelvic Organ Prolapse is defined as the descent of one or more of: the anterior vaginal wall, the posterior vaginal wall, and the apex of the vagina (cervix/uterus) or vault after hysterectomy.

Absence of prolapse is defined as stage 0 support; prolapse can be staged from stage I to stage IV.

- ***Anterior vaginal wall prolapse*** is defined as descent of the anterior vagina so that the urethrovesical junction (a point 3 cm proximal to the external urinary meatus) or any anterior point proximal to this is less than 3 cm above the plane of the hymen.

- ***Prolapse of the apical segment of the vagina*** is defined as any descent of the vaginal cuff scar (after hysterectomy) or cervix, below a point that is 2 cm less than the total vaginal length above the plane of the hymen.

- ***Posterior vaginal wall prolapse*** is defined as any descent of the posterior vaginal wall so that a midline point on the posterior vaginal wall 3 cm above the level of the hymen or any posterior point proximal to this, is less than 3 cm above the plane of the hymen.

➢**Rectal examination (circumferential):** this might lead to the detection of nonurological diseases such as rectal carcinoma, fistula and fecal impaction.

➢ ***Pad testing*** may be used to quantify the amount of urine lost during incontinence episodes, and methods range from a short provocative test to a 24-hour pad test.