

In the name of God



Diabetic Bladder or Diabetic Cystopathy & related complications



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Ishfahan university
of medical sciences

Diabetes and Neuropathy

➤ Among the complications of diabetes, a group of clinical syndromes caused **by damage to the peripheral and autonomic nervous systems** are by far the most prevalent

➤ Distal symmetric

polyneuropathy manifests

with a 'stocking and glove'

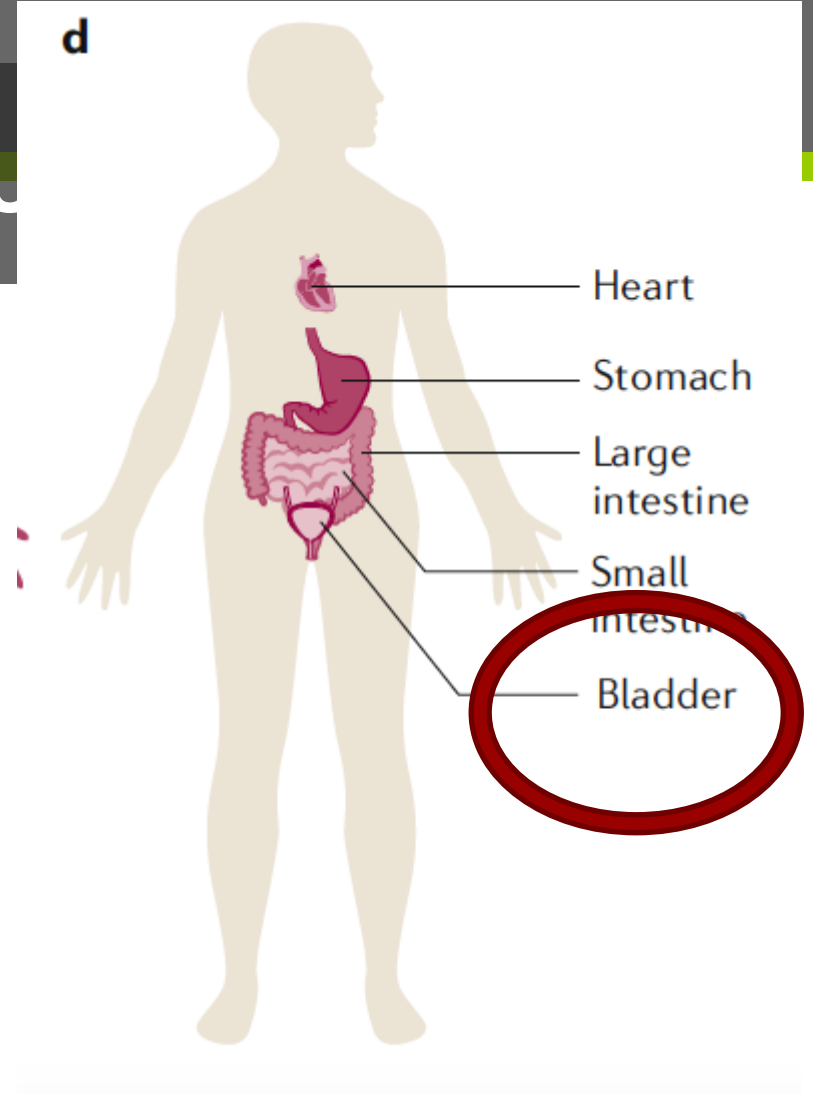
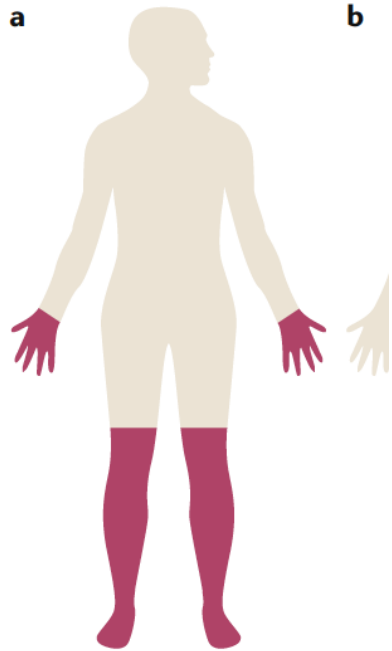
distribution.

➤ Diabetic neuropathy is considered

a **length-dependent** neuropathy.



Diabetes and Neu



Diabetic Cystopathy Incidence

- The consequences of diabetes on bladder function have been known since 1864
- While Diabetes is of easy recognition, Diabetic neuropathy and cystopathy develops **insidiously** and LUTS not appear until the disease in **advanced stage**
- Incidences of diabetic Cystopathy : 37% to 77%

Diabetic Cystopathy Definition;

- Cai Frimodt-Moller (**1976**) coined the term diabetic cystopathy to describe the involvement of the lower urinary tract by Diabetes.
- The **classic description** of voiding dysfunction secondary to diabetes is that of a peripheral and autonomic neuropathy that first affects sensory afferent pathways,

Diabetic Cystopathy Definition;

- Diabetic Cystopathy in the broad interpretation of the term is Diabetic autonomic neuro-bladder were considered as patients that have :
- **sensory impairment**
- Sensory-motor impairment
- Motor impairment
- Neuropathic detrusor over activity

, Ho CH, Tai HC Yu HJ. Urodynamic findings in female diabetic patients with and without overactive bladder symptoms. Neurourol. Urodyn. 2010; 29: 424–7.

Diabetic cystopathy was classically described(ICS) as

- impaired bladder sensation,
- increased bladder capacity
- decreased detrusor contractility



Diabetic Cystopathy Incidence

- Gender
- Age
- Duration of Diabetic Disease
- Clinical peripheral Neuropathy

- Diabetic Cystopathy: Epidemiology and Related Disorders & LICH R JR, GRANT O. Vesical abnormalities incident to diabetes mellitus.
/ Urol. 1948;59:863-71.

Duration of Diabetic Disease

- **Diabetes patients have diverse progressive bladder dysfunction according to the diabetes stage**
- **50% DEVELOP Diabetic nephropathy but. 80% develop Nephropathy.**
- **Risk factors:**

Diabetic Cystopathy & Urinary Tract Infection

- The higher frequency of UTI is **not related to Diabetic cystopathy** but related to bladder outlet disorders especially in older women.
- **Urinary tract infections are more common, more severe, and carry worse outcomes in patients with type 2 diabetes mellitus.**

Diabetic cystopathy a predisposing factor for UTI

- incomplete bladder emptying due to autonomic neuropathy may all contribute to the enhanced risk of urinary tract infections in these patients.

Urodynamic and clinical presentation of Diabetic Cystopathy

Early Compensated stage

- UDS:
- Overactive Bladder
and storage symptoms

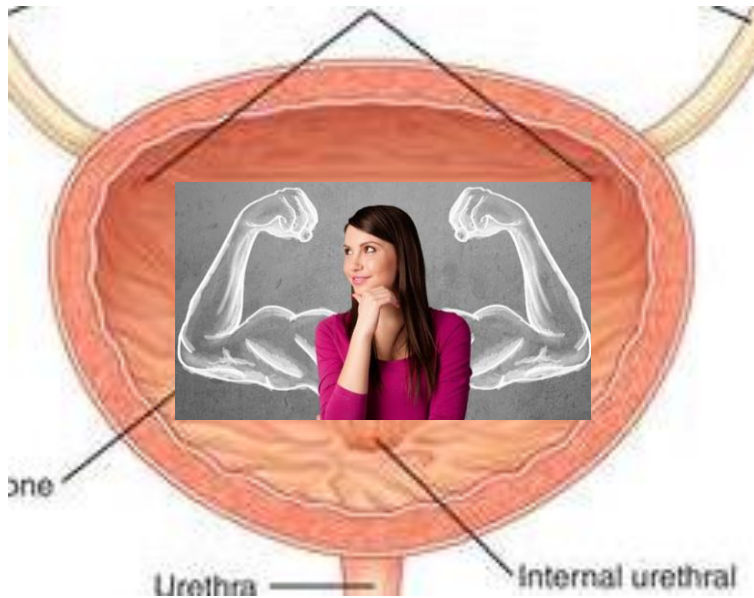
Late Decompensated stage

- UDS: Atonic end stage bladder
- Which could further lead to bladder dysfunction
/Bilateral HUN/Renal failure

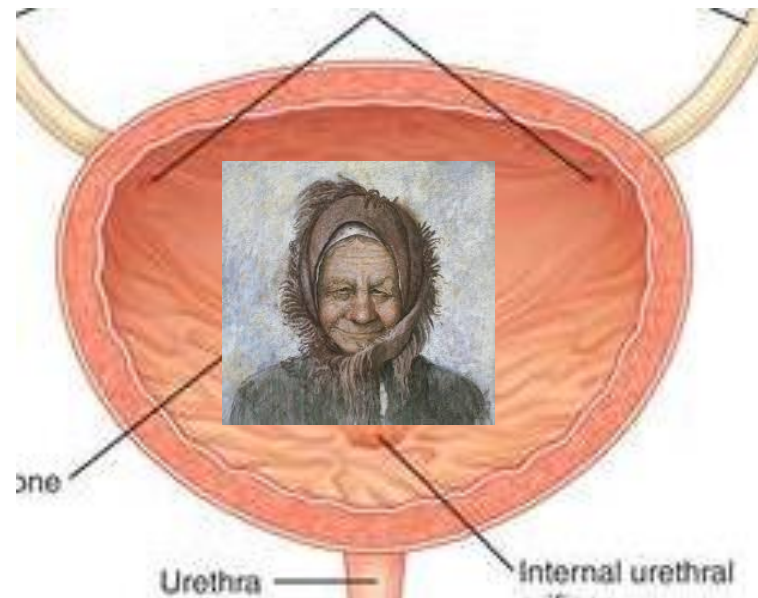
Urodynamic analysis of the impact of diabetes mellitus on bladder function. Tsuyoshi Majima et al. International Journal of Urology (2019)

OAB mirroring the scenario of UAB

OAB:Over active bladder



UAB:Under Active Bladder



Diabetic Cystopathy & Obesity



CLINICAL CARE / EDUCATION / NUTRITION / PSYCHOSOCIAL RESEARCH
2009

Prevalence and Risk Factors for Urinary Incontinence in Overweight and Obese Diabetic Women: Action for Health in Diabetes (Look AHEAD) study

Suzanne Phelan, PHD; Aika M. Kanaya, MD; Leslee L. Subak, MD; Patricia E. Hogan, MS, MPH;
Mark A. Espeland, PHD; Rena R. Wing, PHD; Kathryn L. Burgio, PHD; Vicki DiLillo, PHD; Amy A. Gorin, PHD;
Delia S. West, PHD;
Jeanette S. Brown, MD the Action for Health in Diabetes (Look AHEAD) Research Group



Corresponding author: Suzanne Phelan, sphelan@calpoly.edu.

- 1 *A complete list of the members of the Action for Health in Diabetes (Look AHEAD) Research Group can be found in an online appendix available at <http://care.diabetesjournals.org/cgi/content/full/dc09-0516/DC1>

Volume 32, Issue 8
August 2009





920 participants were studied. In multivariable analyses, central obesity (per 10 cm larger waist) was associated with higher odds of UI in both sexes (odds ratio [SUI in females (**UUI in both sexes OAB in females**).



General obesity) was associated with UI, UUI, urgency and frequency in both sexes, and with SUI and OAB in females.



Urology
Volume 123, January 2019, Pages 34-43



Ambulatory, Office-based, and Geriatric Urology

Relationship Between Central Obesity, General Obesity, Overactive Bladder Syndrome and Urinary Incontinence Among Male and Female Patients Seeking Care for Their Lower Urinary Tract Symptoms

[H. Henry Lai](#)^a  , [Margaret E. Helmuth](#)^b, [Abigail R. Smith](#)^b, [Jonathan B. Wiseman](#)^b, [Brenda W. Gillespie](#)^c, [Ziya Kirkali](#)^d,
for the Symptoms of Lower Urinary Tract Dysfunction Research Network (LURN)

[Show more](#) 

Diabetic Cystopathy

- Transition from normal **functioning urothelial cells** to secretory senescence cells would not only disrupt the barrier function of this layer but may result in altered signaling and sensation of bladder fullness; dysfunction of this layer is known to result in symptoms of fr

Urothelial Senescence in the Pathophysiology of Diabetic Bladder Dysfunction – A Novel Hypothesis

Nicole S. Klee^{1*}, Cameron G. McCarthy², Steven Lewis¹, Jaine I. Vincent¹ and R. Clinton Webb¹ <https://www.frontiersin.org/articles/10.3389/fphys.2018.00072/full>

¹Department of Physiology, Medical College of Georgia at Augusta University, Augusta, GA, United States, ²Department of Physiology and Pharmacology, University of Toledo College of Medicine and Life Sciences, Toledo, OH, United States,

³Department of Surgery, Medical College of Georgia at Augusta University, Augusta, GA, United States



Diabetic Cystopathy

INTERNATIONAL JOURNAL OF
UROLOGY

International Journal of Urology (2019)

doi: 10.1111/iju.13935

Original Article

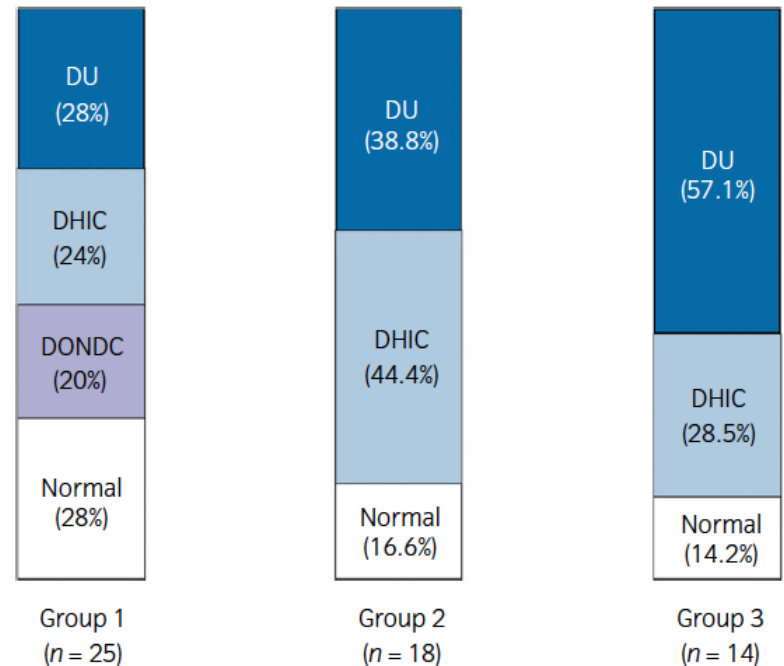
Urodynamic analysis of the impact of diabetes mellitus on bladder function

Tsuyoshi Majima, Yoshihisa Matsukawa, Yasuhito Funahashi, Shun Takai, Masashi Kato, Tokunori Yamamoto and Momokazu Gotoh

- the prevalence of **detrusor neuropathic overactivity/**impaired contractility pattern was highest in cases with diabetic **retinopathy**.
- **Conclusions:** Diabetes patients have diverse progressive bladder dysfunction according to the **diabetes stage**. An optimal screening program is necessary to detect and manage diabetic cystopathy at an early stage.

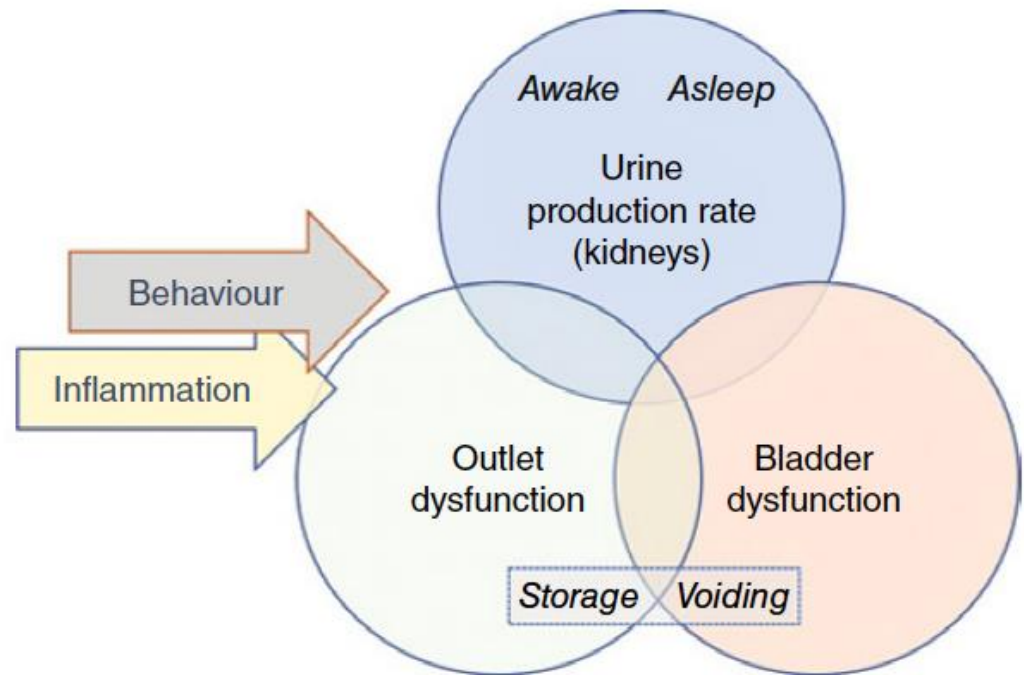
Distribution of urodynamic patterns according to the status of diabetic Duration & complications.

Detrusor underactivity pattern was found with the highest frequency in cases with both diabetic **retinopathy** and diabetic **nephropathy**.



Urodynamic presentation of Diabetic Cystopathy

Both **storage** and **voiding** problems must be considered as potentially resulting from **bladder** and/or **outlet** dysfunction.



A sensory neurogenic bladder results from disease that selectively interrupts **the sensory fibers between the bladder and the spinal cord or the afferent tracts to the brain.**

Diabetes mellitus, tabes dorsalis, and pernicious anemia are most commonly responsible



Cystometry in Dia Cystopathy

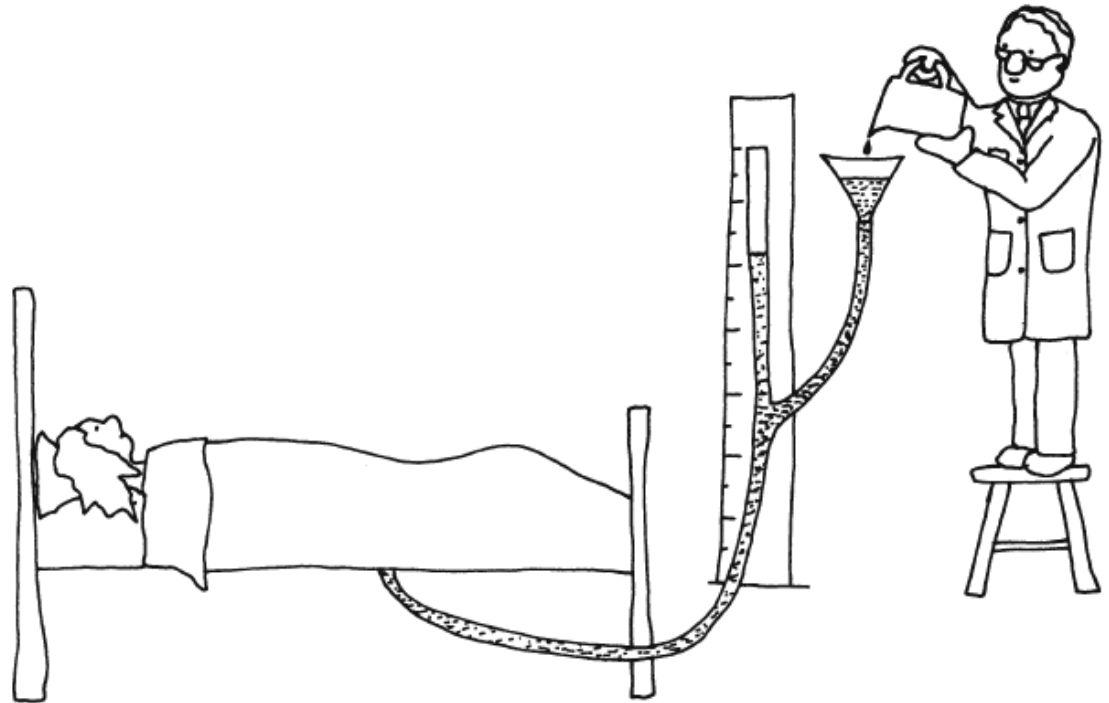


Fig. 3.25 Simple cystometry using a water manometer. 📖

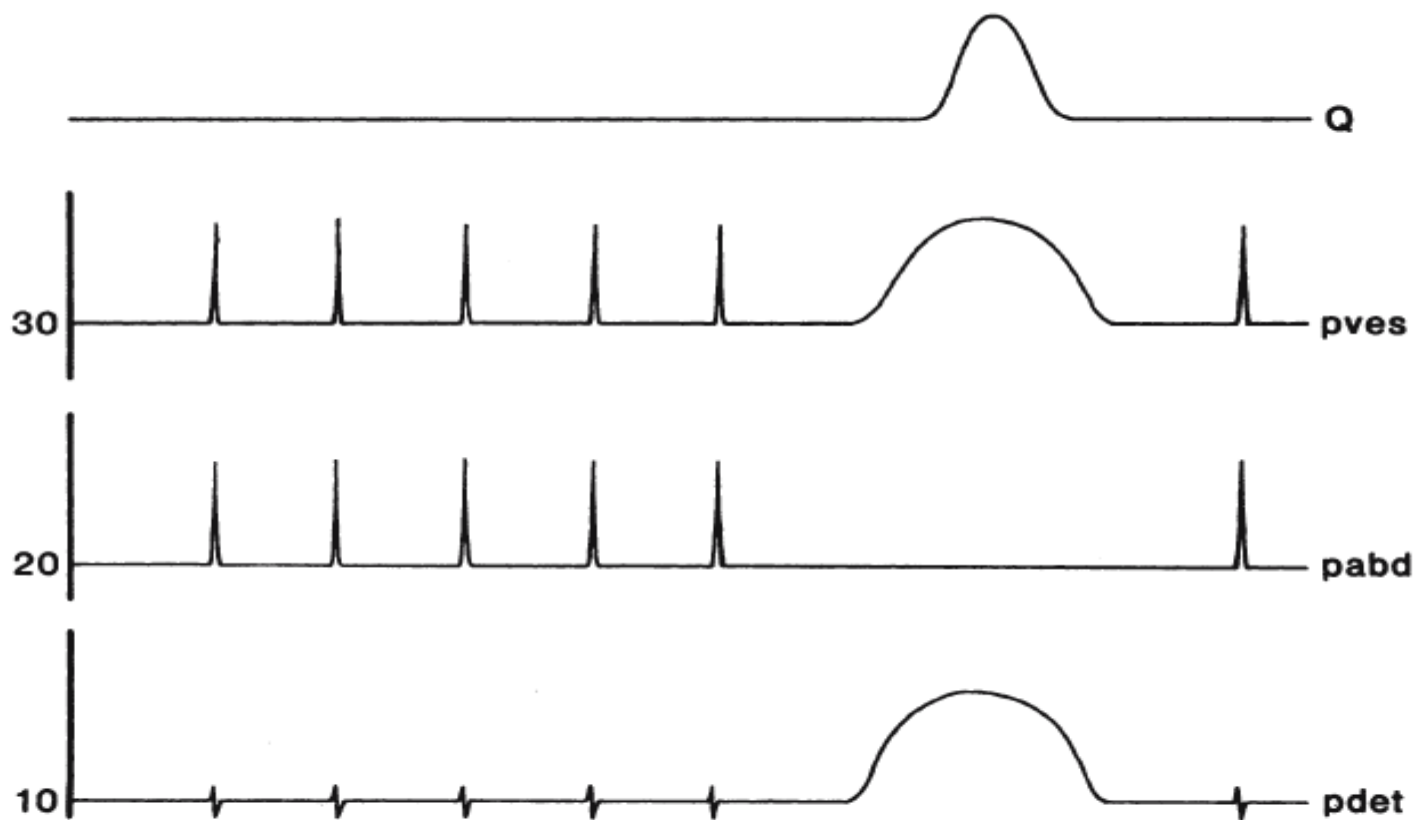



Fig. 3.48 Quality control: the patient is asked to cough every minute during filling *and* after voiding to ensure that the catheters have not become displaced during micturition. 

End stage diabetic cystopathy

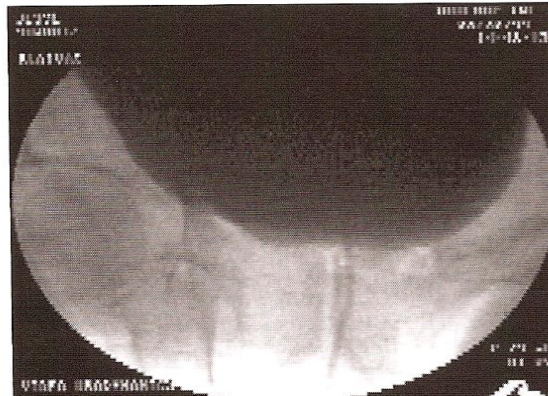
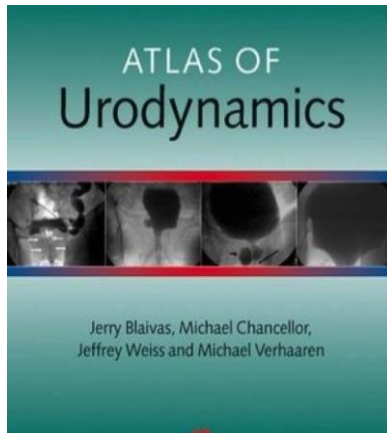
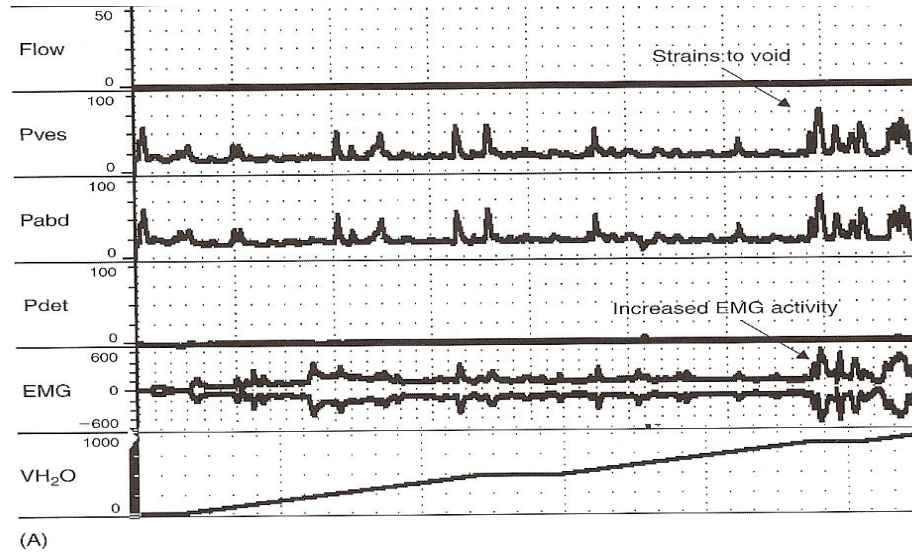


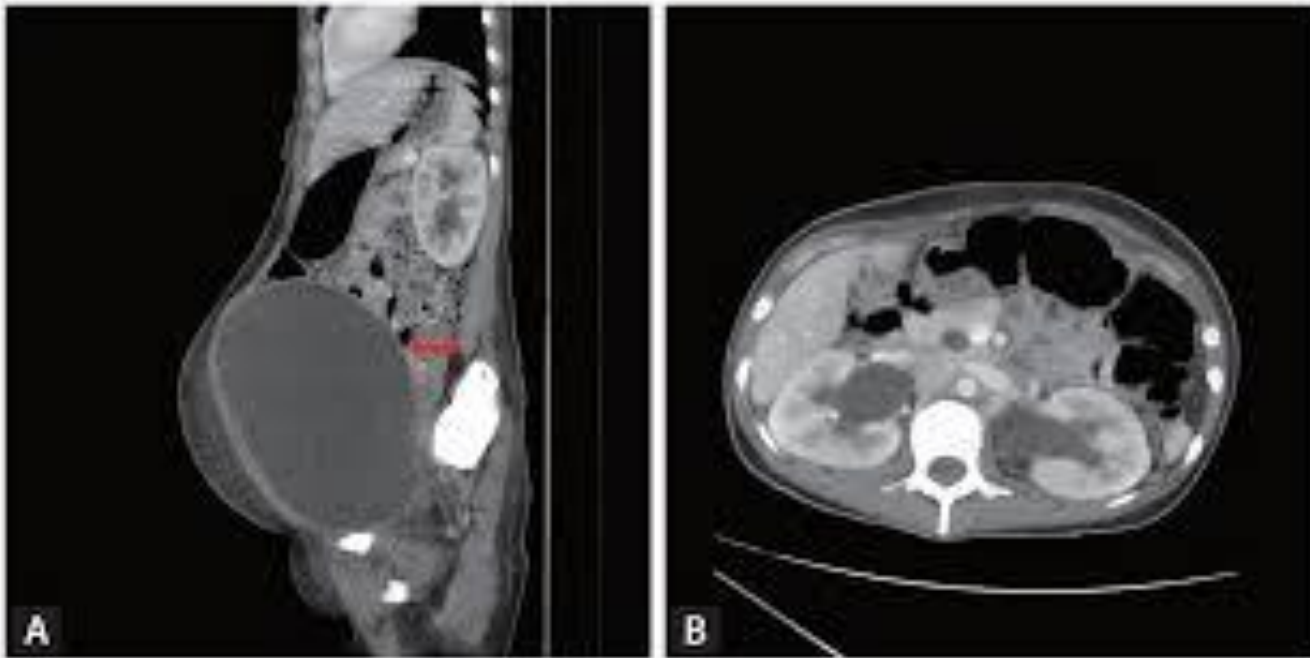
Fig. 14.11 End stage diabetic cystopathy in a diabetic man who denied LUT retention and was catheterized. A study was done 1 month after self-catheterization. (A) Urodynamic study 1st urge=640ml, and severe urgency he was asked to try to void. During voiding, the cystogram

A 65-Year-Old Female with Diabetic Neurogenic Bladder Presenting with Storage Symptoms

- CC: This is a 65-year-old female with diabetic nephropathy, who was referred from the urology clinic for **voiding difficulty**.
- PI: hesitancy and prolonged voiding (>30 min) from 2 yr ago
- PMH: Diabetes (Type 2) from 21 yr ago
- She started to have tingling sensation (Neuropath.) and ophthalmopath. two yrs ago

Diabetic Cystopathy

Imaging and paraclinical evaluation of diabetic Bladder



Diary voiding

Translation and validation of the Persian IC bladder di

Sona Tayebi et al Int Urogynecol J. 2

| روز سوم..... تاریخ..... | | | | | روز دوم..... تاریخ..... | | | | | | |
|-------------------------|----------|-----------------------------|---------|-------|-------------------------|----|----------|-----------------------------|---------|-------|---------------|
| رد | حس مثانه | بیرون ده ادراری (میلی لیتر) | نوشیدنی | | زمان | رد | حس مثانه | بیرون ده ادراری (میلی لیتر) | نوشیدنی | | زمان |
| | | | نوع | میزان | | | | | نوع | میزان | |
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| | | | | | صبح ۱۱ | | | | | | صبح ۱۱ |
| | | | | | ظهر ۱۲ | | | | | | ظهر ۱۲ |
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| | | | | | عصر ۵ | | | | | | عصر ۵ |
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| | | | | | عصر ۷ | | | | | | عصر ۷ |
| | | | | | شب ۸ | | | | | | شب ۸ |
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| | | | | | صبح ۵ | | | | | | صبح ۵ |

کدهای حس مثانه

- 0- در صورتیکه هیچ احساس نیازی به ادرار کردن نداشتید و فقط بخاطر مسائل اجتماعی به توالت رفتید.
- ۱- اگر حس نیاز به ادرار کردن طبیعی بود و احساس اضطرار در دفع ادرار نداشتید.
- ۲- اگر شما اضطرار در دفع ادرار دارید ولی قبل از رسیدن به دستشویی رفع می‌تواند.
- ۳- اگر شما اضطرار در دفع ادرار دارید و به هر نحو ممکن خود را به دستشویی می‌رسانید و ادرار نشت نمی‌کند.
- ۴- اگر شما اضطرار در دفع ادرار دارید و نمی‌توانید خود را به دستشویی برسانید و ادرار نشت می‌کند.

Original Article

Reliability and Validity of the Persian Language Version of the Female Lower Urinary Tract Symptoms' Long form Questionnaire

Abstract

Background: Lower urinary tract symptoms (LUTS) are important and prevalent health problems that seriously affect many women and their quality of life (QOL). The female LUTS long form (FLUTS-LF) is a robust measure to assess the QOL of women. This study aimed at translating FLUTS-LF and assessing the reliability and validity of this questionnaire among Iranian patients with LUTS. **Materials and Methods:** Forward and backward translations of FLUTS-LF questionnaire were carried out by the research team. Data collection was conducted from November 2015 to March 2016 in Isfahan, Iran. A total of 237 women completed the Persian version of FLUTS-LF, incontinence QOL, and International Prostate Symptom Score (IPSS) questionnaires. We evaluated Cronbach's alpha coefficient, intraclass correlation coefficient (ICC), stability (reliability), and confirmatory factor analysis (CFA) of the questionnaire. **Results:** The mean (standard deviation) age of the participants was 45.4 (12.50) years (range 20-70 years). Face and content validities were acceptable and missing data comprise 2% of the total data. Internal consistency (Cronbach's alpha) of the urinary symptoms was 0.78. ICC of the total score in urinary symptoms section was 0.95. Indexes of factor analysis were assessed and found to be acceptable. A high correlation was observed between the total scores of FLUTS-LF and IPSS. **Conclusions:** It seems that FLUTS-LF questionnaire can be a suitable instrument for assessing LUTS and their impacts on Iranian women's QOL.

Keywords: Female, Iran, lower urinary tract symptoms, psychometrics, questionnaire

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ICIQ-FLUTS Long Form

علامه اداری

افراد زیادی گاهی علامه اداری را تجربه می کنند. ما سعی داریم تا تعیین کنیم چه تعداد از افراد، به این علامه مبتلا هستند و چقدر آن ها را آزار می دهد. خواهشمندیم به سوالات زیر پاسخ دهید توجه داشته باشید که، وضعیت اداری شما به طور متوسط، در چهار هفته گذشته مورد پرسش قرار می گیرد.

(۱) تاریخ تولد خود را بنویسید. /-/-

(۲) چند مرتبه در طول روز اداری می کنید؟

| | | | | |
|------------------------------------|--------------|---------------|----------------|-------------------|
| ۱ تا ۶ مرتبه | ۷ تا ۸ مرتبه | ۹ تا ۱۰ مرتبه | ۱۱ تا ۱۲ مرتبه | ۱۳ مرتبه یا بیشتر |
| این موضوع چقدر شما را آزار می دهد؟ | | | | |
| خیلی زیاد | زیاد | متوسط | کم | اصلا |

(۳) بطور متوسط چند مرتبه در طول شب باید برای اداری کردن از خواب بیدار شوید؟

| | | | | |
|------------------------------------|---------|---------|---------|------------------|
| هیچ | ۱ مرتبه | ۲ مرتبه | ۳ مرتبه | ۴ مرتبه یا بیشتر |
| این موضوع چقدر شما را آزار می دهد؟ | | | | |
| خیلی زیاد | زیاد | متوسط | کم | اصلا |

(۴) آیا پیش می آید که ناگهان، احساس اداری کنید و مجبور شوید به سرعت خود را به دستویی برسانید؟

| | | | | |
|------------------------------------|---------|-------|------------|-------|
| هرگز | به ندرت | گاهی | اغلب اوقات | همیشه |
| این موضوع چقدر شما را آزار می دهد؟ | | | | |
| خیلی زیاد | زیاد | متوسط | کم | اصلا |

(۵) آیا قبل از اینکه بتوانید خود را به دستویی برسانید، اداراتان می ریزد؟

| | | | | |
|------------------------------------|---------|-------|------------|-------|
| هرگز | به ندرت | گاهی | اغلب اوقات | همیشه |
| این موضوع چقدر شما را آزار می دهد؟ | | | | |
| خیلی زیاد | زیاد | متوسط | کم | اصلا |

(۶) آیا در مثانه احساس درد می کنید؟

| | | | | |
|------------------------------------|---------|-------|------------|-------|
| هرگز | به ندرت | گاهی | اغلب اوقات | همیشه |
| این موضوع چقدر شما را آزار می دهد؟ | | | | |
| خیلی زیاد | زیاد | متوسط | کم | اصلا |

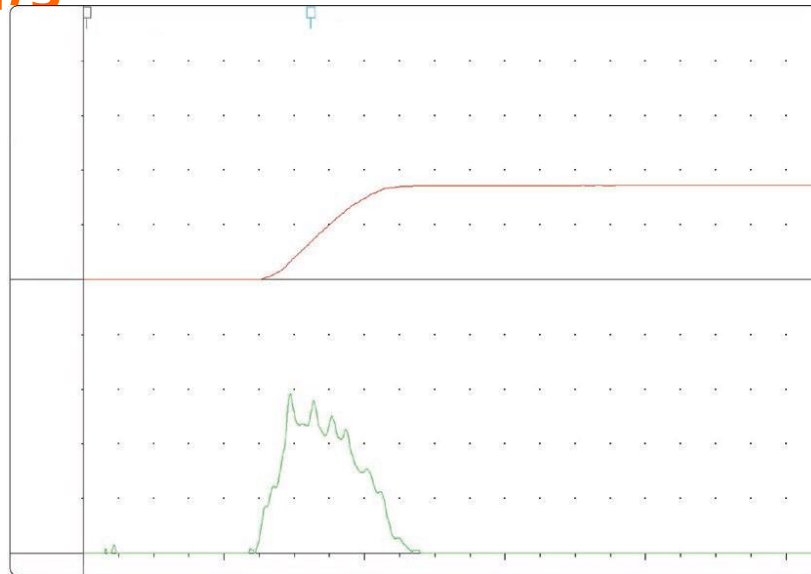
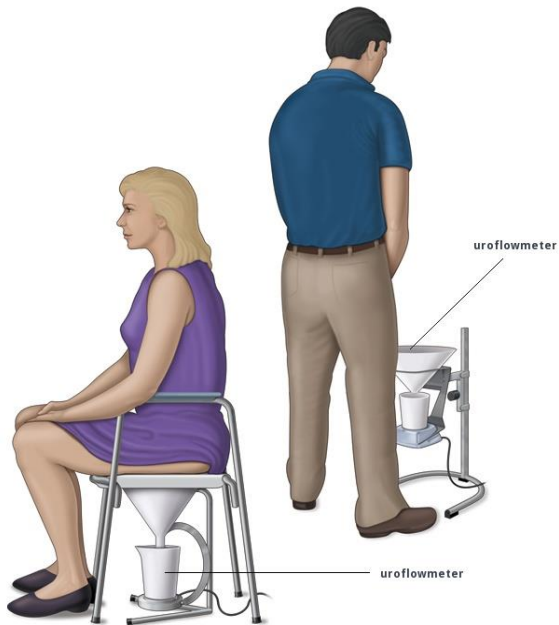
(۷) چند مرتبه ریزی اداری دارید؟

| | | | | |
|------------------------------------|--------------------------|------------------------|-----------------|------------------|
| هرگز | یک مرتبه یا کمتر در هفته | دو یا سه مرتبه در هفته | یک مرتبه در روز | چند مرتبه در روز |
| این موضوع چقدر شما را آزار می دهد؟ | | | | |
| خیلی زیاد | زیاد | متوسط | کم | اصلا |

(۸) آیا هنگام فعالیت بدنی، خم و راست شدن، سرفه و عطسه، اداراتان می ریزد؟

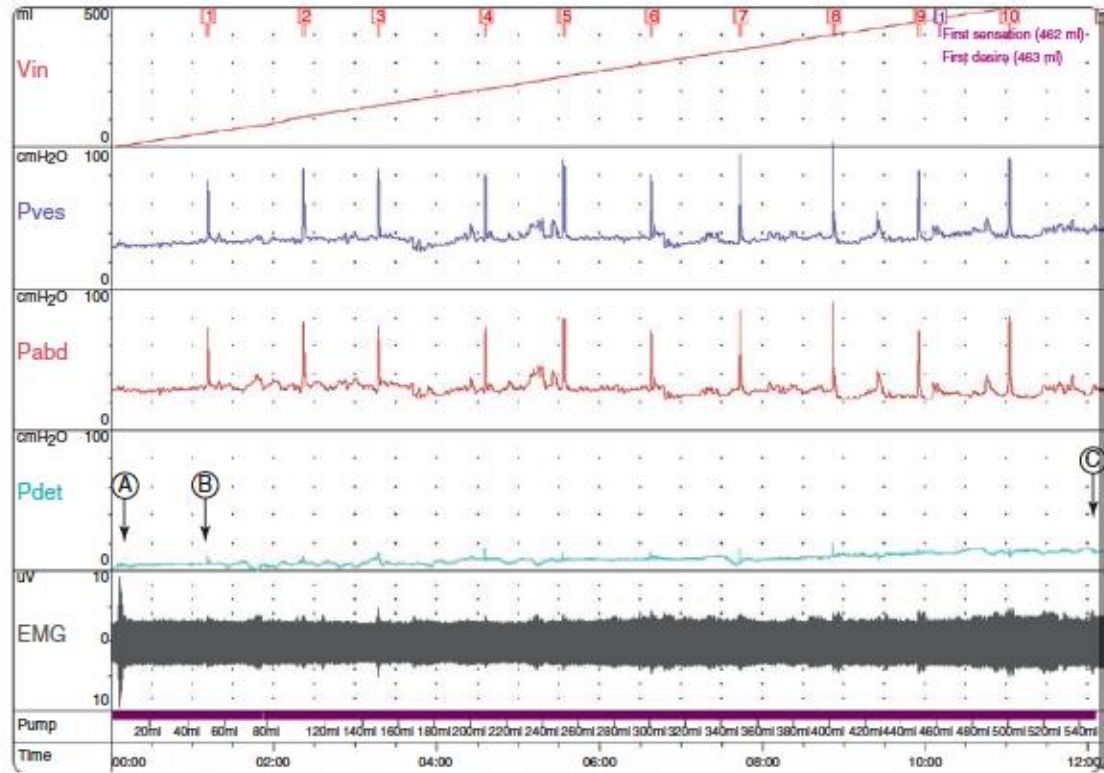
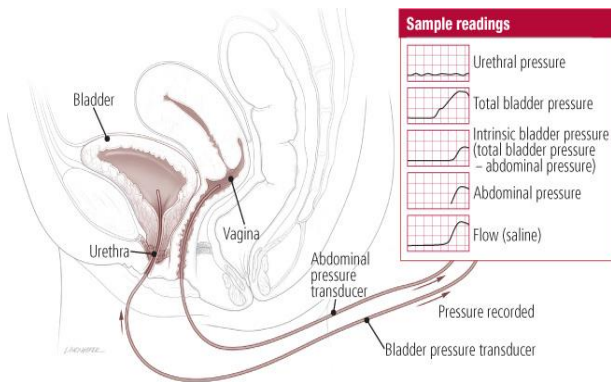
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| هرگز | به ندرت | گاهی | اغلب اوقات | همیشه |
| این موضوع چقدر شما را آزار می دهد؟ | | | | |
| خیلی زیاد | زیاد | متوسط | کم | اصلا |

Uroflow metry
Voi. Volu.170 cc
PVR: 340 CC
pEAK FLOW;10 m/s



Filling Cystome

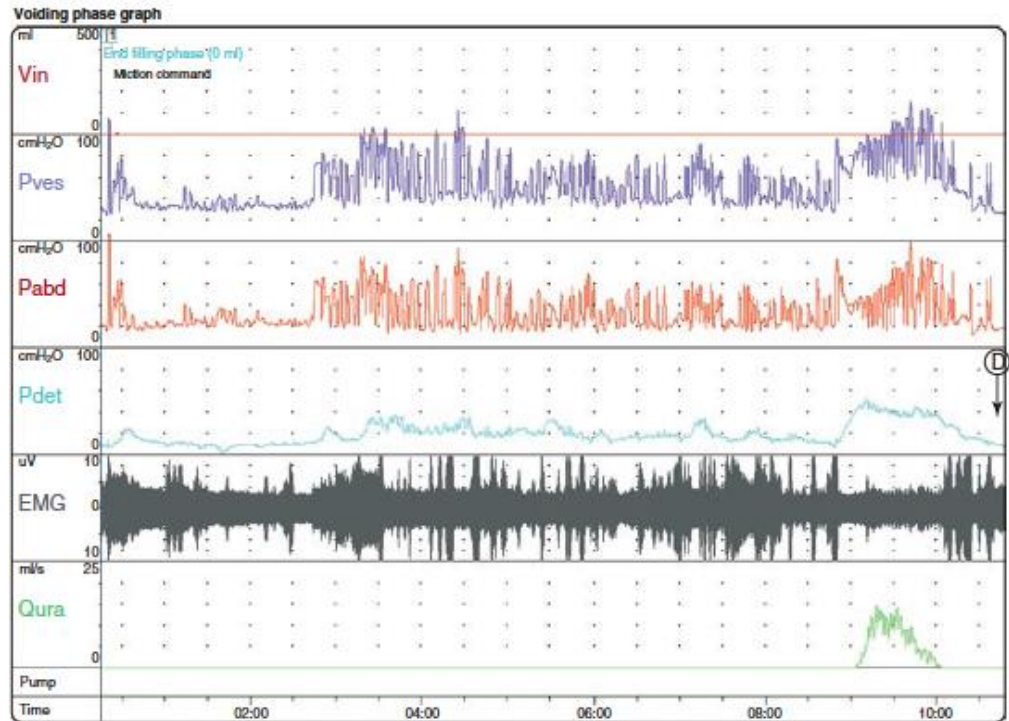
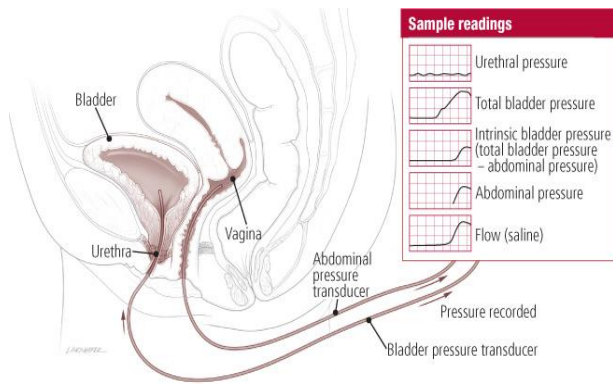
12.3.4 Filling Cystometry



Cystometry results

| | |
|-----------------------------|--------|
| Infused volume | 551 ml |
| Volume lost through leakage | 0 ml |
| Bladder filling | 551 ml |
| Maximal bladder capacity | CC4 ml |

Voiding Cystometry (Pressure-Flow Stud



Voiding phase results

| | |
|----------------------|-----------------------|
| Extra infused volume | 1 ml |
| Peak flowrate | 15 ml/s |
| Pdet at peak flow | 40 cmH ₂ O |
| Voided volume | 366 ml |
| Flow time | 55 s |
| Voiding time | 55 s |
| Delay time | 524 s |
| Average flowrate | 7 ml/s |

UDS Report in Diabetic Cystopathy

| STORAGE PHASE | VOIDING PHASE |
|---|---|
| Bladder function | Bladder function |
| <ul style="list-style-type: none"> Detrusor function <u>Normal</u> Detrusor overactivity | <ul style="list-style-type: none"> Detrusor function Normal Abnormal <u>Detrusor underactivity</u> Acontractile detrusor |
| <ul style="list-style-type: none"> Bladder sensation Normal/Bladder oversensitivity/<u>Reduced</u>/Absent/ Nonspecific bladder awareness/Bladder pain | |
| <ul style="list-style-type: none"> Bladder capacity: Normal/<u>High</u>/Low | |
| <ul style="list-style-type: none"> Bladder compliance: <u>Normal</u>/High/Low | |
| Urethral function | Urethral function |
| <ul style="list-style-type: none"> <u>Normal urethral closure mechanism</u> Incompetent urethral closure mechanism Urethral relaxation incontinence Urodynamic stress incontinence | <ul style="list-style-type: none"> <u>Normal</u> Abnormal (Mechanical bladder outflow obstruction/ Dysfunctional voiding/Detrusor sphincter dyssnergia/Non-relaxing urethral sphincter obstruction/Delayed relaxation of the urethral sphincter) |

Sensory neuropathic Bladder Urodynamic Findings

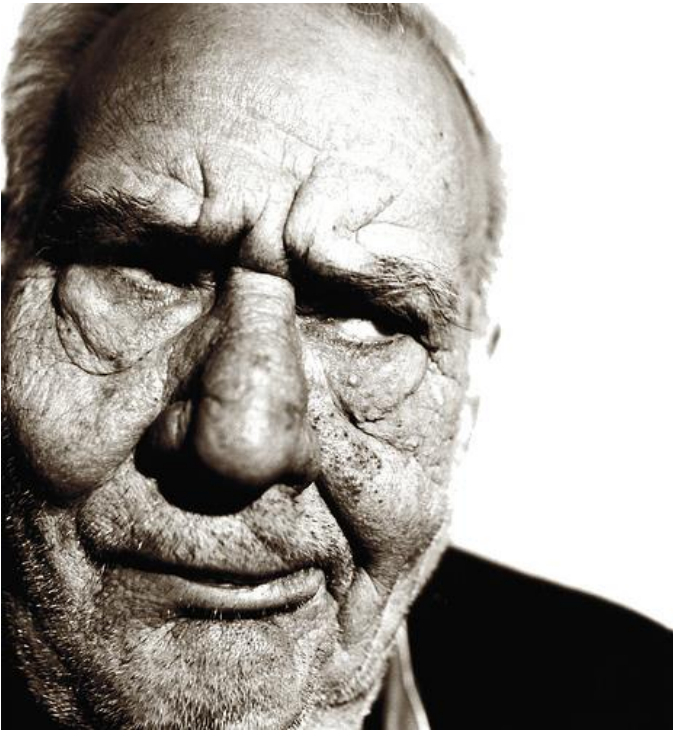
- • Poor bladder sensation
- • High bladder capacity
- • Underactive detrusor activity (controversial)
- • Possibility of problem in urethral sphincter relaxation

All patient presented with UAB do not have UD!



- HashimH,Abrams P
- .Is the bladder a reliable witness for predicting detrusor over activity?
- J Urol 2006

BOO Or DU?



- MO. Ak. is an 80-year-old man who developed urinary retention after undergoing angiography for evaluation of CHD.
- PMH: Diabetes , HPT , Discopathy and arthrosis
- Sono: 65 ml prostate ,No HUN,PVR=230 ml

Urodynamics Made Easy

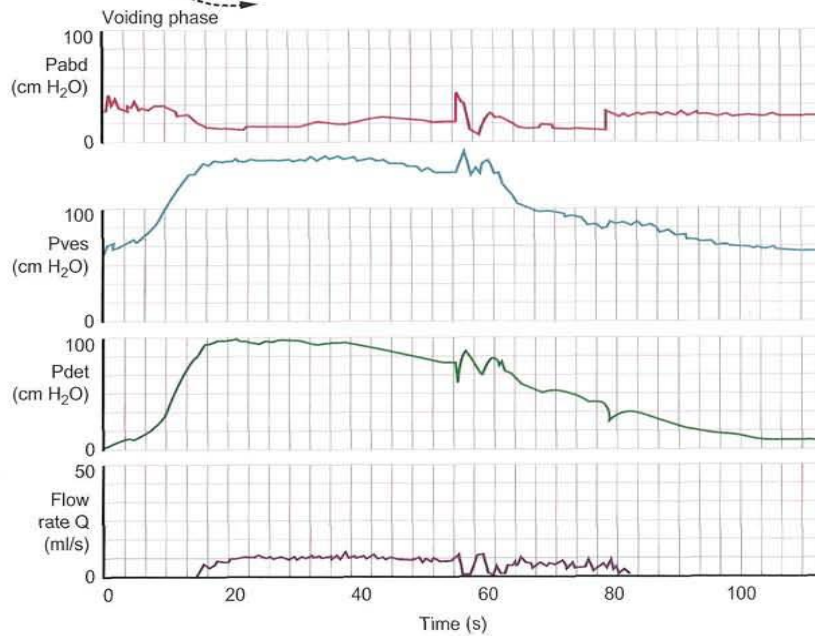
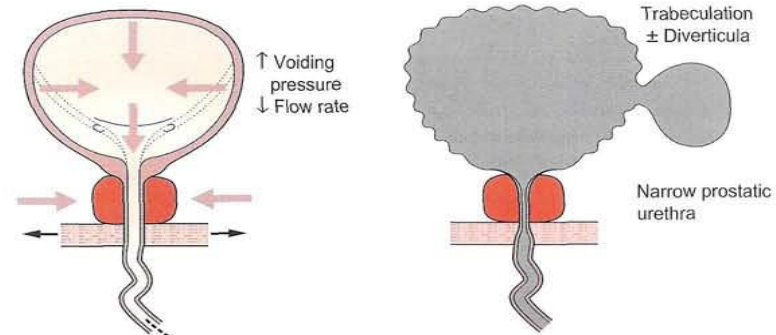
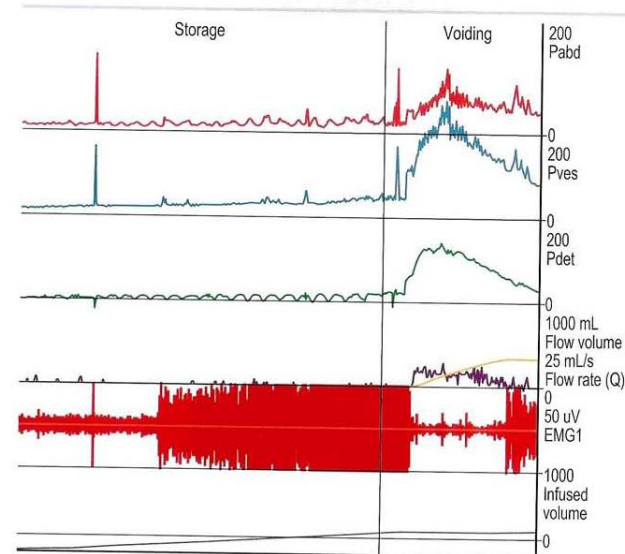


Figure 6.4 Typical cystometry appearances for bladder outlet obstruction. In this case the screening schematic shows obstruction at the level of the prostate.

BOO

One page graph. Bladder Outlet Obstruction

Example traces



| | Storage phase | Voiding phase |
|---|--|--|
| Detrusor function | Normal, although rectal contractions give the misleading appearance of phasic detrusor overactivity | Overactive (high pressure) |
| Urethral/bladder outlet function | Normal; increased EMG activity due to rectal contractions and recruitment (See chapter 9) | Prolonged, low flow (obstructive); appropriate decrease in EMG activity with voiding |
| Quality | Dampening of intra-vesical line, rectal contractions throughout, artefactual movements to flowmeter during storage phase | |
| Diagnosis | Bladder outlet obstruction | |

Table A3.1

6 Voiding disorders and bladder outlet obstruction

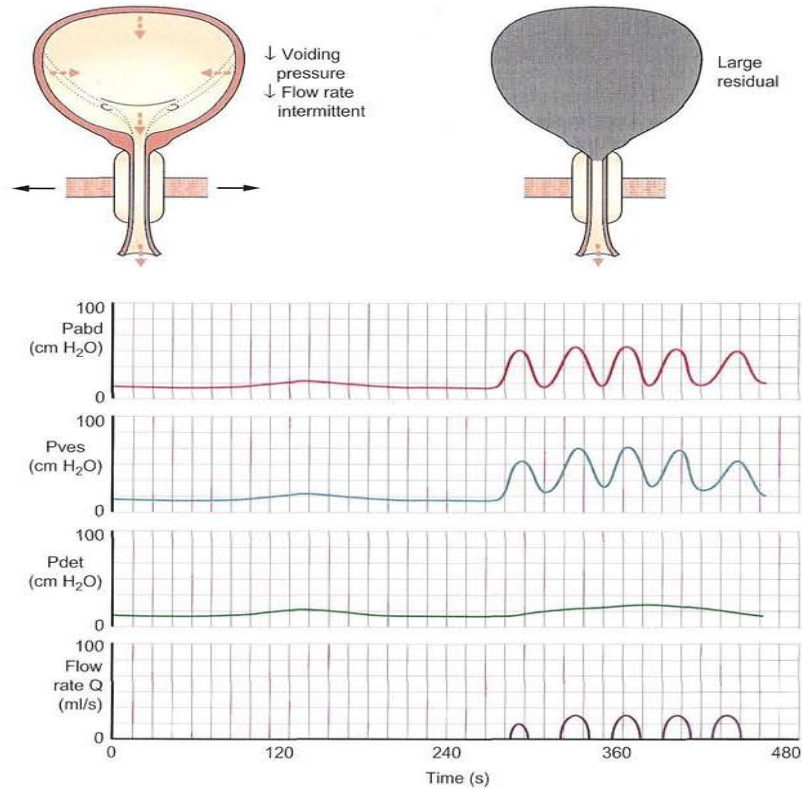


Figure 6.9 Typical video urodynamic appearances for an underactive detrusor. The trace shows virtually no detrusor activity. The patient has voided small amounts by intermittent abdominal straining.

UAB

Diabetic Cystopathy treatment

- Treatment choice depends on clinical symptoms and urodynamic abnormalities:
- Because her PVR was low, the patient was first put on **alpha-blocker** medication.
- . **CIC**(Clean Intermittent Catheterization) may become necessary if PVR increases.



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middle-aged women. They may develop urinary retention or

LETTER TO EDITOR

Bladder involvement in thyroid dysfunction

Sir,

Thyroid dysfunction is a common problem, especially among women. Thyrotoxicosis is characterized by exaggerated responses to catecholamines, while in hypothyroidism, narrowing of adaptive responses is observed. It is, therefore, not surprising to see gastrointestinal and lower urinary tract symptoms (LUTS) in patients with thyroid dysfunction.

Unfortunately, published articles addressing voiding dysfunction in hyper- and hypothyroidism are scarce, most of them being case reports. In June 2012, we searched PubMed, Google Scholar, EMBASE, and Ovid for articles about these issues. The obtained results are as follows.

Most hypothyroid patients are middle-aged women. They may develop retention of urine and renal failure.^[1] This retention could be the presenting symptom or may be found incidentally in a patient who has other signs and symptoms of hypothyroidism like myxedema, malaise, a change in the tone of voice, and mental confusion.^[2] Paralytic ileus (colonic pseudo-obstruction) has been reported in association with bladder atony in the setting of hypothyroidism.^[1-3] Uremia may ensue as the result of urinary retention or acute kidney injury.^[3] In less severe cases, only a reduction in the voiding frequency and urine volume is observed without bothering the patient.^[4]

reported to be normal, decreased,^[6] or increased.^[5] In a study, although the peak flow rate was significantly less than the control group, it was still in the normal range.^[4] Chung and colleagues followed up some 11,000 female hyperthyroid patients for 3 years and found that the risk of developing urinary incontinence in them was more than in the healthy, control group (hazard ratio = 1.54).^[7]

Bladder involvement may be the presenting symptom or may appear a few months after the onset of the thyroid disease and is responsive to proper medical therapy. However, complete improvement may take several weeks to a few months.

To better define the manifestations of bladder involvement in thyroid dysfunction, larger cohort of patients with thyroid problems should be evaluated for LUTS and urodynamic study be performed when indicated. Also, the incidence of thyroid dysfunction in patients suffering with LUTS should be determined.

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E-mail: mah_zargham@yahoo.com

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Prevalence and Clinical Significance of Subclinical Hypothyroidism in Diabetic Peripheral Neuropathy

Mahmoud A Allam¹

Youssef A Nassar¹

Hassameldien S Shaban¹

Background and Aim: Diabetic peripheral neuropathy (DPN) is one of the most common and disabling complications of DM. Many studies documented the prevalence of clinical and subclinical hypothyroidism (SCH) in diabetic patients but not in the particular group of

➔ **Conclusion:** The present study showed that SCH is highly prevalent in DPN patients and is independently related to its severity.

Prevalence and Clinical Significance of Subclinical Hypothyroidism in Diabetic Peripheral Neuropathy

Mahmoud A Allam¹

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ORIGINAL ARTICLE

Hypothyroidism is prevalent among adult women with chronic lower urinary tract symptoms

Mahmoud Zargham, Mohammad Reza Hajian, Farshid Alizadeh, Mohammad-Javad Eslami, Noshad Khalili Faroujeni, Farshad Gholipour 

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Metabolic Syndrome and Urologic Diseases

Association between metabolic syndrome and severity of lower urinary tract symptoms (LUTS): an observational study in a 4666 European men cohort

Pourya Pashootan, Guillaume Ploussard, Arnaud Cocaul*, Armaury de Gouvello and François Desgrandchamps

Urology Department, Saint-Louis Hospital, and *Endocrinology and Metabolism Department, Pitié-Salpêtrière Hospital, APHP, Paris, France

- Metabolic syndrome (MetS) is a complex entity consisting of multiple
- interrelated factors including insulin resistance, central adiposity, dyslipidemia, atherosclerotic disease, low-grade inflammation, and in males, low testosterone levels.
- MetS has been linked to a number of urologic diseases including nephrolithiasis, BPH and LUTS s, erectile dysfunction, male infertility, female incontinence, and prostate cancer.

Metabolic Syndrome and Urologic Diseases

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- interrelated factors including insulin resistance, central adiposity, dyslipidemia, atherosclerotic disease, low-grade inflammation, and in males, low testosterone levels.
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Association between metabolic syndrome and severity of lower urinary tract symptoms (LUTS): an observational study in a 4666 European men cohort

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urinary incontinence



Definition of Urinary Incontinence

➤ The International Continence Society (ICS) defines the symptom of

urinary incontinence as the

“complaint of any involuntary loss of urine”

(Abrams et al, 2003)

UI: “social cancer,”

- The impact of UI cannot be measured in dollars alone.
- A “social cancer,” UI impacts every facet—social, physical, sexual, psychological, and medical—of human life at work and at home.



UI Questionnaires

پرسشنامه ICIQ-UISF

بسیاری از مردم گاهی وقتها دچار نشت ادراری می‌شوند. ما سعی می‌کنیم تا بدانیم چه تعداد از مردم «بی‌اختیاری ادرار» دارند و چقدر این مسئله برای آنها ناراحت کننده است. ما خوشحال می‌شویم که شما بتوانید با یادآوری وضعیت خود در چهار هفته گذشته، به سوالات زیر پاسخ دهید.

۱) تاریخ تولد:

۲) زن مرد

۳) هر چند وقت یکبار نشت ادراری دارید؟

۰-هرگز

۱-حدود یک بار در هفته

۲-۳-۲ بار در هفته

۳-یکبار در روز

۴-چندین بار در روز

۵-همیشه

۵) نشت ادراری چقدر کیفیت زندگی شما را تحت تاثیر قرار داده است؟

فوق العاده ۰ ۱ ۲ ۳ ۴ ۵ ۶ ۷ ۸ ۹ ۱۰ هیچ

۶) نشت ادراری شما در چه زمانی اتفاق می‌افتد؟

هرگز

درست قبل از اینکه خود را به توالت برسانید.

وقتی سرفه یا عطسه می‌کنید.

وقتی خواب هستید

وقتی فعالیت بدنی یا ورزش می‌کنید.

نشت وقتی که دفع ادرار تمام شده و می‌خواهید لباس زیرتان را بپوشید.

بلافاصله بعد از تمام شدن دفع ادراری

بدون دلیل مشخص

همیشه

مجموع امتیازات: ۵ + ۴ + ۳ =

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Original Article

Reliability and Validity of the Persian Language Version of the Female Lower Urinary Tract Symptoms' Long form Questionnaire

Abstract

Background: Lower urinary tract symptoms (LUTS) are important and prevalent health problems that seriously affect many women and their quality of life (QOL). The female LUTS long form (FLUTS-LF) is a robust measure to assess the QOL of women. This study aimed at translating FLUTS-LF and assessing the reliability and validity of this questionnaire among Iranian patients with LUTS. **Materials and Methods:** Forward and backward translations of FLUTS-LF questionnaire were carried out by the research team. Data collection was conducted from November 2015 to March 2016 in Isfahan, Iran. A total of 237 women completed the Persian version of FLUTS-LF, incontinence

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Pourmomeny¹,
Samane Alebouye-
Langeroudi¹,
Mahtab Zargham²

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Centre, Department of
Physical Therapy, School of

| روز سوم ----- تاریخ ----- | | | | | روز دوم ----- تاریخ ----- | | | | | | |
|---------------------------|-------------|-------------------------------|---------|-----|---------------------------|----|-------------|-------------------------------|---------|-----|---------------|
| پد | حس مثانه | برون ده ادراری (میلی لیتر) | نوشیدنی | | زمان | پد | حس مثانه | برون ده ادراری (میلی لیتر) | نوشیدنی | | زمان |
| | | | میزان | نوع | | | | | میزان | نوع | |
| | | | | | صبح ۶ | | | | | | صبح ۶ |
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| | | | | | صبح ۱۰ | | | | | | صبح ۱۰ |
| | | | | | صبح ۱۱ | | | | | | صبح ۱۱ |
| | | | | | ظهر ۱۲ | | | | | | ظهر ۱۲ |
| | | | | | ۱ بعد از ظهر | | | | | | ۱ بعد از ظهر |
| | | | | | ۲ بعد از ظهر | | | | | | ۲ بعد از ظهر |
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| | | | | | صبح ۴ | | | | | | صبح ۴ |
| | | | | | صبح ۵ | | | | | | صبح ۵ |

کدهای حس مثانه

- 0- در صورتیکه هیچ احساس تیزی به ادرار کردن نتوانستید و فقط بخاطر مسائل اجتماعی به توالت رفتید.
- 1- اگر حس تیز به ادرار کردن طبیعی بود و احساس اضطراب در دفع ادرار نتوانستید.
- 2- اگر شما اضطراب در دفع ادرار دارید ولی قبل از رسیدن به دستتویی رفع می‌شود.
- 3- اگر شما اضطراب در دفع ادرار دارید و به هر نحو ممکن خود را به دستتویی می‌رسانید و ادرار نتنت نمی‌کند.
- 4- اگر شما اضطراب در دفع ادرار دارید و نمی‌توانید خود را به دستتویی برسانید و ادرار نتنت می‌کند.

Causes of Urinary Incontinence

Bladder dysfunction

- **Detrusor overactivity**
- **Impaired compliance**

Sphincter dysfunction

- **Intrinsic sphincter deficiency**
- **Urethral support defect (hypermobility)**



