

LABORIE SYMPOSIUM When, how and why should I use urodynamics in my clinical practice?

Prof. Enrico Finazzi Agrò

Rome, ITALY



Programme

- Introduction (Enrico Finazzi Agrò)
- Good Urodynamic Practice (Peter Rosier)
- The role of urodynamics in male LUTS and OAB, female incontinence and neurogenic (Enrico Finazzi Agrò)
- Group work (25 minute) (Ruth Kirschner Hermanns, Gommert Van Koeveringe, Ulrich Mehnert
- Wrap up of group work
- Closing remarks (Peter Rosier)













Scientific report:	WHO IS DR. GOOGLE?
ICS-SUT PVR Cystometry Pressure flow PVR Flow PVR Cystometry Pressure flow PVR Intervention Intervention Intervention Intervention Intervention Intervention Intervention Intervention	 Most famous doctor on the planet Your Major Competitor Almost every one of your patients consults with Dr. Google before they contact you Dr. Google only performs house calls and is open 24/7/365
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Forence 2017 Application of the service of the ser

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Technical and clinical quality control during invasive urodynamics.

Recommendations

The WG recommends that everyone performing or evaluating updynamics is able to recognize usual pressure patterns and is able to perform continuous quality control during the test.

The WG recommends that training and a process of continuous knowledge maintenance as the base for performing (standard good-) urodynamic practice should be established.

Terms related to the cystometry observations and evaluation:

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Cough pressure peak (NEW)



- · Leak point pressure (NEW)
- · Cough associated detrusor overactivity (NEW) .
- Position change (NEW)
- · Rectal contractions (NEW)
- Dropped p_{abd} at Void (NEW)
- Straining (NEW)
- After-contraction (NEW)



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Accessory tests or measurements (if applicable -no further standard).	We
Overall judgement of the technical quality and the clinical reliability of the test as judged by the investigator.	Gu
Representativeness of the test protocol to reflect the 'usual LUT behaviour' as reported by the patient.	Но
Diagnosis:	
 Filling sensation diagnosis or urodynamic condition (ST2002). Cystometry (detrusor) pressure pattern diagnosis Volume /capacity 	Mi
 Pressure-flow diagnosis (compared with uroflowmetry) includes: Bladder outlet function, or (grade of) outflow obstruction Detrusor contraction, 	Sh
Voiding efficiency diagnosis (Void%).	
The WG recommends development of an	Tai
ICS standard urodynamics report -template.	and the second se

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Gunnar Lose; University of Copenhagen Herlev Hospital, Herlev, Denmark

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Michael Guralnick; Medical College of Wisconsin Milwaukee, WI, USA

Sharon Eustice; Peninsula Community Health, Cornwall, UK

amara Dickinson; UT Southwestern Medical Center Dallas, TX, USA

Hashim Hashim; Bristol Urological Institute Bristol UK

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Conclusion

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The WG expresses the hope that implementation of this Good Urodynamic Practices helps to increase the individual clinical, as well as the research quality of urodynamics.



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The actual role of urodynamics

Prof. Enrico Finazzi Agrò



PTV





does not have any add-on value as long as detailed office evaluation is carried out prior to primary SUI surgery in women with isolated SUI or stress-predominant MUI who have a normal bladder capacity and PVR.





anterior or apical pelvic-organ prolapse of 1 cm or more distal to

the hymen











Low peak whany flow rate has been identified as an independent predictor of whany retention after RPT. Cateoff was suggested 13 ands for a sensitivity of 47% and a specificity of 35%.

235

There are several prooperative wodynamic variables associated with persistent UUUL, such as DO, lower systematric capacity, lower bladder volume at the first unhibited debussor contraction and higher opening debussor pressure.

Ann Partal. Effectiveness of Indexember lines, in mixed ordering incentences. Supervised 2001. Systematic review and indexedually like to Drogenetical 2001. Lee JK, et al. Pressure and approximation of the animatic strategy in making incention and the animatic strategy in a making and provide strategy. Biol Common and Approximate and a strategy in making and an anitation of the animatic strategy.

Regarding de novo U and UUI, pre-axisting ISD and DO were independent predictors in a large relocapeetive study





• Recommendations (Grade 2)

- The committee recommends to consider to manage a patient with SUI-S without UDS diagnosis...
- The committee recommends to consider to manage a patient with SUI-S with UDS diagnosis when clinical signs of not typical or not uncomplicated or complex SUI exist.





AUA/SUFU Adult Urodynamics Guideline A Clinical Review

Clinton W. Collins, MD*, J. Christian Winters, MD*.*

Urol Clin N Am 41 (2014) 353–362

"In complex, complicated patients, preoperative UDS may be particularly helpful"



MALE LUTS

URODYNAMICS IN MEN

Due to the invasive nature of urodynamic testing due to catheter placement, computer-urodynamic investigation is generally <u>only offered once</u> <u>conservative treatment has failed</u>.

Non-Neurogenic Male Lower Urinary Tract Symptoms (LUTS), incl. Benign Prostatic Obstruction (BPO)

INVASIVE URODYNAMICS 2.11.7.5 Recommendations LE GR PFS should be performed only in individual patients for specific indications prior to surgery or В 3 when evaluation of the underlying pathophysiology of LUTS is warranted. PFS should be performed in men who have had previous unsuccessful (invasive) treatment for В LUTS. When considering surgery, PFS may be used for patients who cannot void > 150 mL When considering surgery in men with bothersome, predominantly voiding LUTS, PFS may be performed in men with a PVR > 300 mL. When considering surgery in men with bothersome, predominantly voiding LUTS, PFS may be 3 Performed in man aged > 80 years. When considering surgery in men with bothersome, predominantly voiding LUTS, PFS should be performed in men aged < 50 years. 3 В

	LE	GR	
PFS should be performed only in individual patients for specific indications prior to surgery or when evaluation of the underlying pathophysiology of LUTS is warranted.	3	В	
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When considering surgery in men with bothersome, predominantly voiding LUTS, PFS should be performed in men aged < 50 years.	3	В	
		Non-Ne Male Lowe Tract S (L Benign Obstruct	ym ym UTS Pro fion





SUCCESS AFTER TURP

- Related to presence of BPO
- · Related to absence of detrusor underactivity
- Reduced by presence of detrusor overactivity

Seki N: Neurourol Urodyn 2006









What could you find with urodynamics?

- Should urodynamics (UD) ONLY reproduce the symptoms?
- NO! UD should investigate the presence of any dysfunctions of the LUT...

What could you find with urodynamics?

If a patient is incontinent UD can provide informations on the type and severity of incontinence, but as well on:

- Bladder sensation
- Bladder capacity and compliance
- Detrusor function during the filling phase
- Intravesical pressure during filling phase
- Reflux, Diverticula, Christmas tree shaped bladder (Video)
- Detusor function during voiding phase
- Flow rate
- Obstruction (anatomical/functional, DSD)
- Bladder neck/urethral opening (Video)

What could you find with urodynamics?

- Several infomations on LUT function and dysfunction(s)
- Findings of Urodynamic tests be difficult to anticipate from clinical assessment alone in NLUTD (LOE 2) (ICI)
- Pressure development in the bladder is one of the important parameters to be studied and high leak point pressure is a risk factor for renal deterioration (LOE 2). (ICI)





UD in SCI pts

	Group 1 (no VUR) 57 people	Group 2 (VUR) 11 people	pValue
Cistomanometric capacity (ml), mean (SD)	447.5 (117.6)	243.5 (140.7)	<0,0001
First IDC volume (ml), mean (SD)	279.8 (122.5)	146.8 (95.1)	0,001
Maximum det pressure (cmH2O), mean (SD)	39.6 (25.3)	77.2 (45.8)	0,0003
DO-DLPP (cmH2O), mean (SD)	41.2 (24.9)	61 (31)	0,025

Pts presenting a DO-LPP ≥40 cmH2O had more than 3-fold higher risk of VUR in comparison to pts presenting a DO-LPP <40 cmH2O (28% vs. 9%)

Finazzi Agrò et al: EAU 2017



Urodynamics in spinal cord injury pts Variation Variatio Variation Variation Variation Varia







Utility of Urodynamics

- Demonstrate/Categorize SUI
- Quantify SUI
- Rule out DO/Reduced compliance
- Rule out DU/BOO
- Appropriate choice of surgical technique ?

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Male urinary incontinence after radical prostatectomy

- Most common UDS abnormalities
 - Urethral sphincter insufficiency (88%)
 - DO, neo bladder neck obstruction, impaired detrusor contractility

Groutz A: J Urol 2000

 DO present in 34% of UI patients and only in 5% of non UI patients Dubbelman Y: Neurourol Urodyn 2012

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Utility of Urodynamics

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Key words: artificial urinary sphincter: prostatectomy: radiothe



Committee ICI 2016

Urodynamic Testing

ter F.W.M. ROSIER (THE NETHERLANDS)

Hann-Chorng Kuo (Taiwan) Fairloo Finazzi Agro (Italy) Mario De Gennaro (Italy) Andrew Gammie (United Kingdom Hidehiro Kakizaki (Japan) Hashim Hashim (United Kingdom)

ICI 2016 Recommendations (Grade 3)

- This committee recommends that UDS should be performed when RRP UI has not spontaneously improved and conservative measures have failed.
- The committee recommends that UDS for patients with RRP UI is not only done to evaluate USUI but that it is also done specifically to evaluate bladder storage function.

DerBalgrist	Neuro-Urology Case I
	 40y male, SCI sub L2, AIS B after car accident in 2009 Open removal of bladder stones in Libanon 2012 War refugee from Syria 3 years escape journey through Syria, Turkey, Greece, and Croatia Self-supply with indwelling catheters First consultation in our department 09/2015
Urodynamic Cases in Neuro-Urology	Several bladder stones 2cm in ultrasound and cystoscopy
Ulrich Mehnert, MD, FEBU Neuro-Urology	
Balgrist University Hospital University of Zürich	
Zürich, Switzerland	Salar - Universitätskiinik Balgrist Zentrum für Parapiege







