ESSIC
INTERNATIONAL SOCIETY
FOR THE STUDY OF BPS

ESSIC International School

1st Educational French Course

Paris, 13 May 2022

School Directors:
Mauro Cervigni, ESSIC President
Jean Jacques Wyndaele, Chair of ESSIC Education Committee

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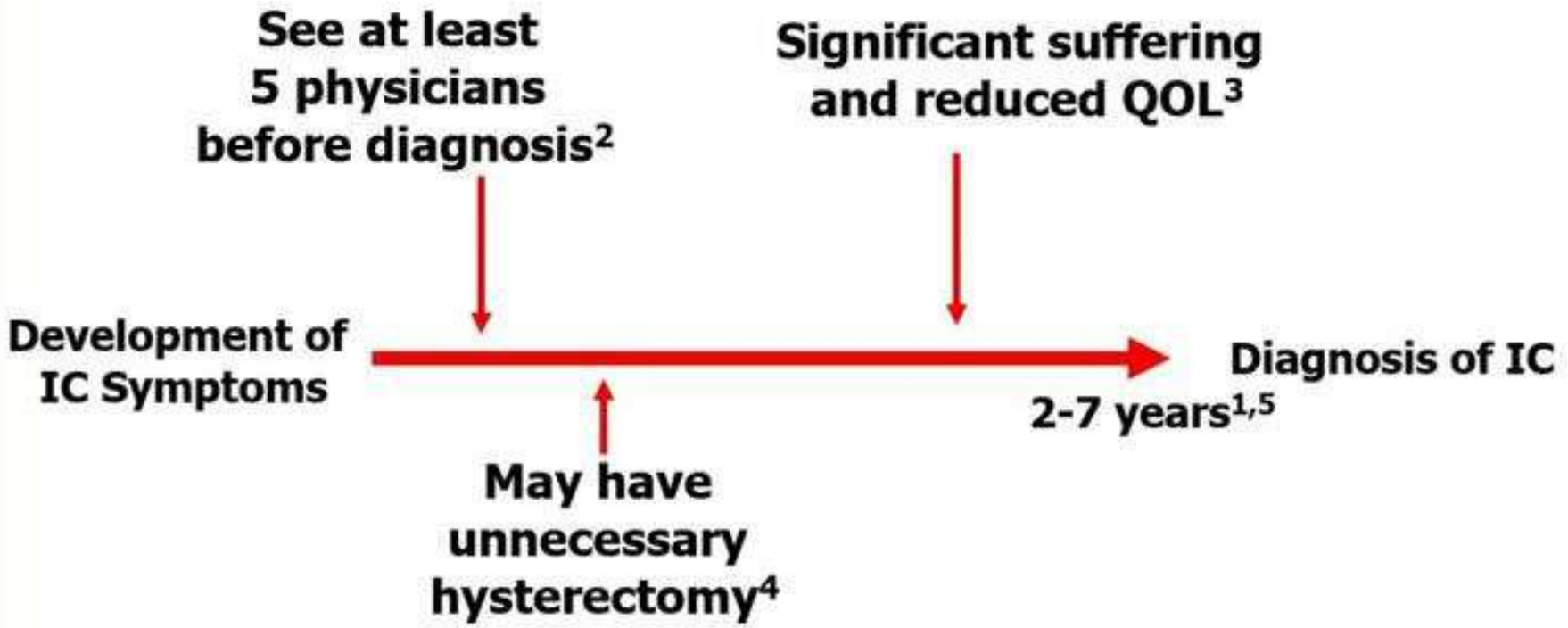
Cystoscopy/Hydrodistension

Andrew Zaitcev, MD
Professor of Urology
Moscow State University of Medicine and Dentistry

BPS/IC is typically diagnosed late in disease continuum

Average time between development of symptoms and diagnosis is 5 years[1]



1. Driscoll A, Teichman JMH. J Urol. 2001;166:2118-2120.
2. Metts JF. Am Fam Physician. 2001;64:1199-1206.
3. Held PJ et al. In: Interstitial Cystitis. Springer-Verlag; 1990:29-48.
4. Carlson KJ et al. Obstet Gynecol. 1994;83:556-565.
5. Messing EM, Stamey TA. Urology. 1978;12:381-392.

4.5.3 *Diagnostic evaluation of primary bladder pain syndrome*

Summary of evidence	LE
Primary bladder pain syndrome has no known single aetiology.	3
Pain in PBPS does not correlate with bladder cystoscopic or histologic findings.	2a
Primary bladder pain syndrome Type 3 C can only be confirmed by cystoscopy and histology.	2a
Lesion/non-lesion disease ratios of PBPS are highly variable between studies.	2a
The prevalence of PBPS-like symptoms is high in population-based studies.	2a
Primary bladder pain syndrome occurs at a level higher than chance with other pain syndromes.	2a
Primary bladder pain syndrome has an adverse impact on QoL.	2a
Reliable instruments assessing symptom severity as well as phenotypical differences exist.	2a

Recommendations	Strength rating
Perform general anaesthetic rigid cystoscopy in patients with bladder pain to subtype and rule out confusable disease.	Strong
Diagnose patients with symptoms according to the EAU definition, after primary exclusion of specific diseases, with primary bladder pain syndrome (PBPS) by subtype and phenotype.	Strong
Assess PBPS-associated non-bladder diseases systematically.	Strong
Assess PBPS-associated negative cognitive, behavioural, sexual, or emotional consequences.	Strong
Use a validated symptom and quality of life scoring instrument for initial assessment and follow-up.	Strong

EAU Guidelines on Chronic Pelvic Pain

D. Engeler (Chair), A.P. Baranowski, B. Berghmans, J. Birch (Patient Advocate), J. Borovicka, A.M. Cottrell, P. Dinis-Oliveira, S. Elneil, J. Hughes, E.J. Messelink (Vice-chair), R.A. Pinto, M.L. van Poelgeest (Patient Advocate), V. Tidman, A.C. de C Williams
Guidelines Associates: P. Abreu-Mendes, S. Dabestani, B. Parsons, J. Tornic, V. Zumstein
Guidelines Office: J.A. Darraugh

CHRONIC PELVIC PAIN - LIMITED UPDATE
MARCH 2022

Cystoscopy

- Cystoscopy should be performed during anesthesia since sufficient distention is required to visualize lesions characteristic of BPS
- Still, cystoscopy using local anesthesia should not be disregarded
- Typically, the patient can accept filling with only a very limited volume, irrespective of the true bladder capacity during anesthesia
- At the initial office urethrocystoscopy the urethra is evaluated as to mucosa and caliber
- Confusable diseases like tumors, stones, inflammations, and metaplasia other than those associated with BPS can be excluded

Distension Technique

- The use of a rigid cystoscope is preferred to allow rapid rinsing of the bladder, should bleeding occur
- General or regional (spinal or epidural) anesthesia is equally useful, the choice depending on the organization of care, ambulatory, or inpatient
- Diagnostic hydrodistension is performed using the cystoscopy irrigation fluid
- A superimposed hydrostatic pressure of about 80 cm H_2O above the level of the patient's bladder is applied by increasing the height of the fluid bag, in flow supervised using a dripping chamber
- The fluid is allowed to run into the bladder until it stops spontaneously at capacity, as observed when checking the dripping chamber
- The intravesical volume is noted
- The bladder is refilled to approximately 20–50% of capacity and again inspected for lesions and hemorrhages

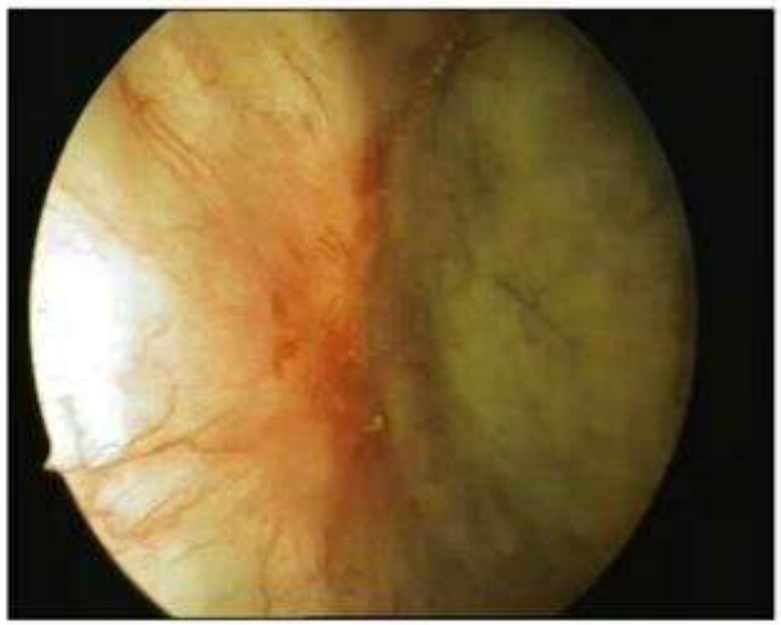
Distension Technique

- It is important to note any changes of the bladder mucosa during filling already from the early phase and on
- When in flow stops, distension is maintained for approximately 3 min.
- In the female leakage around the cystoscope may occur
- Such leakage is easily prevented by manual compression around the urethra, applying pressure on the anterior vaginal wall on either side of the cystoscope
- The bladder should not be “hydrodilated” by syringe - filling or by extending filling after the bladder capacity is reached
- After the diagnostic examination, the use of anesthesia further offers the opportunity to carry out a therapeutic distension as well

The Hunner's lesion

- "The Hunner's lesion typically presents as a circumscript, reddened mucosal area with small vessels radiating towards a central scar, with a fibrin deposit or coagulum attached to this area. This site ruptures with increasing bladder distension, with petechial oozing of blood from the lesion and the mucosal margins in a waterfall manner. A rather typical, slightly bullous edema develops post-distension with varying peripheral extension."

Magnus Fall *in*: Diagnostic Criteria, Classification, and Nomenclature for Painful Bladder Syndrome / Interstitial Cystitis: An ESSIC Proposal.
Eur Urol 2008; 53:60-7

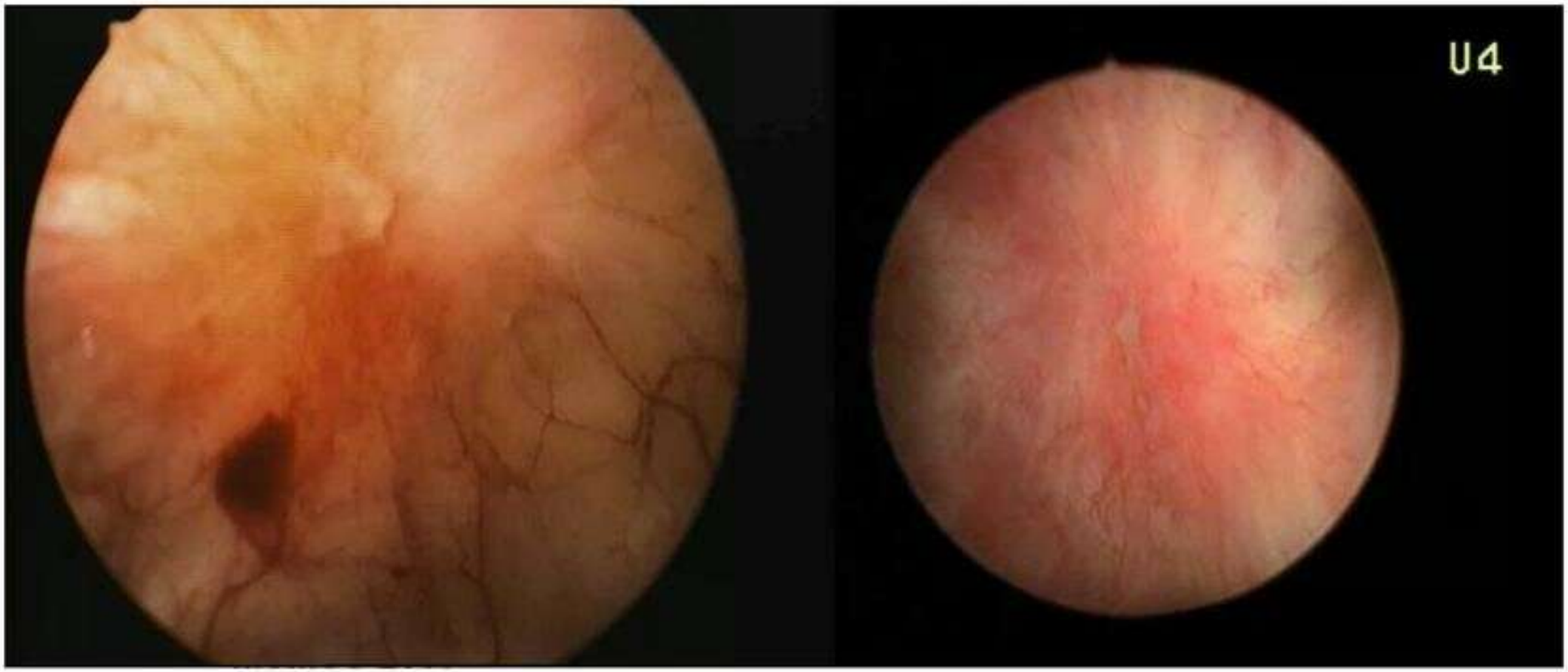


The Hunner's lesion

...circumscript, reddened mucosal area with small vessels radiating towards a central scar.....

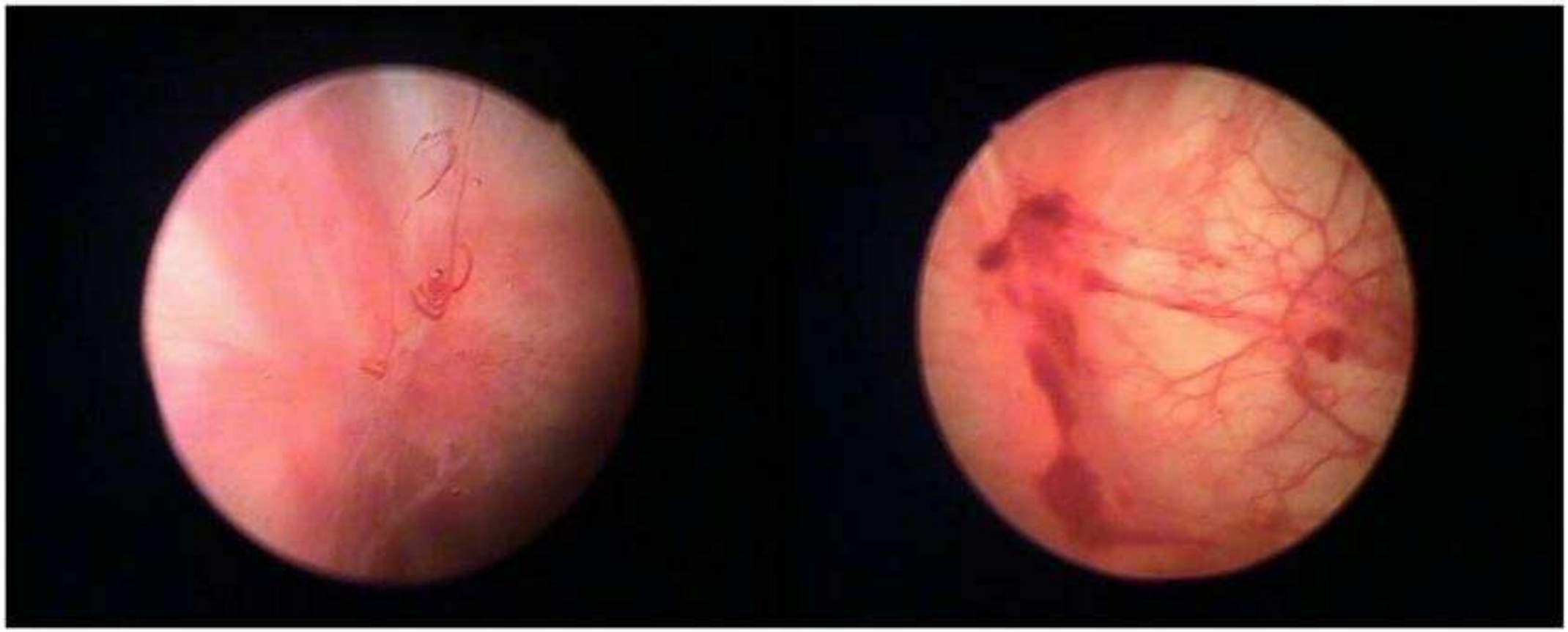
Громова
Язвенный цистит
10.10.2007

...with a fibrin deposit or coagulum attached to this area.



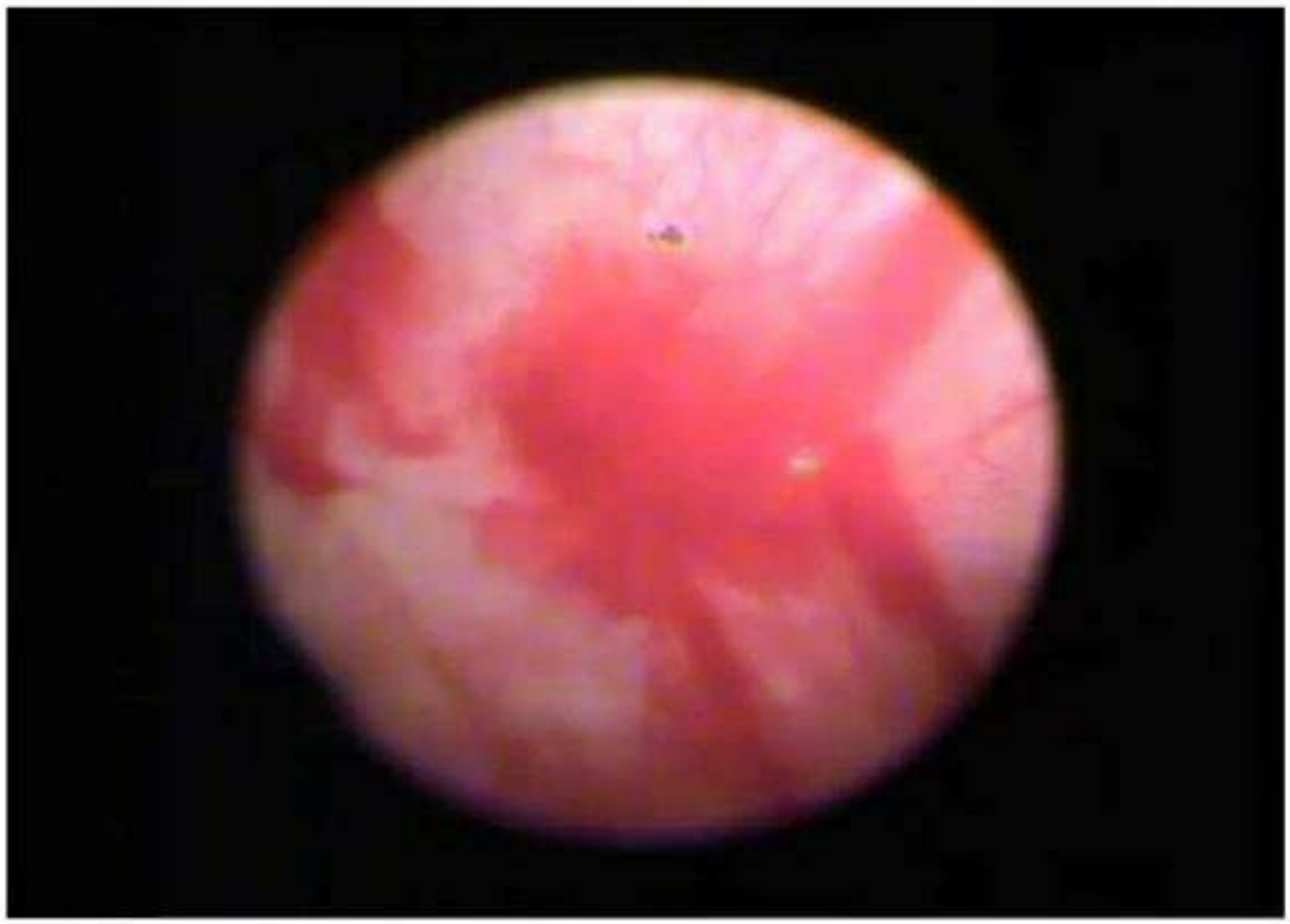
MSMSU, 2007

This site ruptures with increasing bladder distension, with petechial oozing of blood from the lesion and the mucosal margins in a waterfall manner.



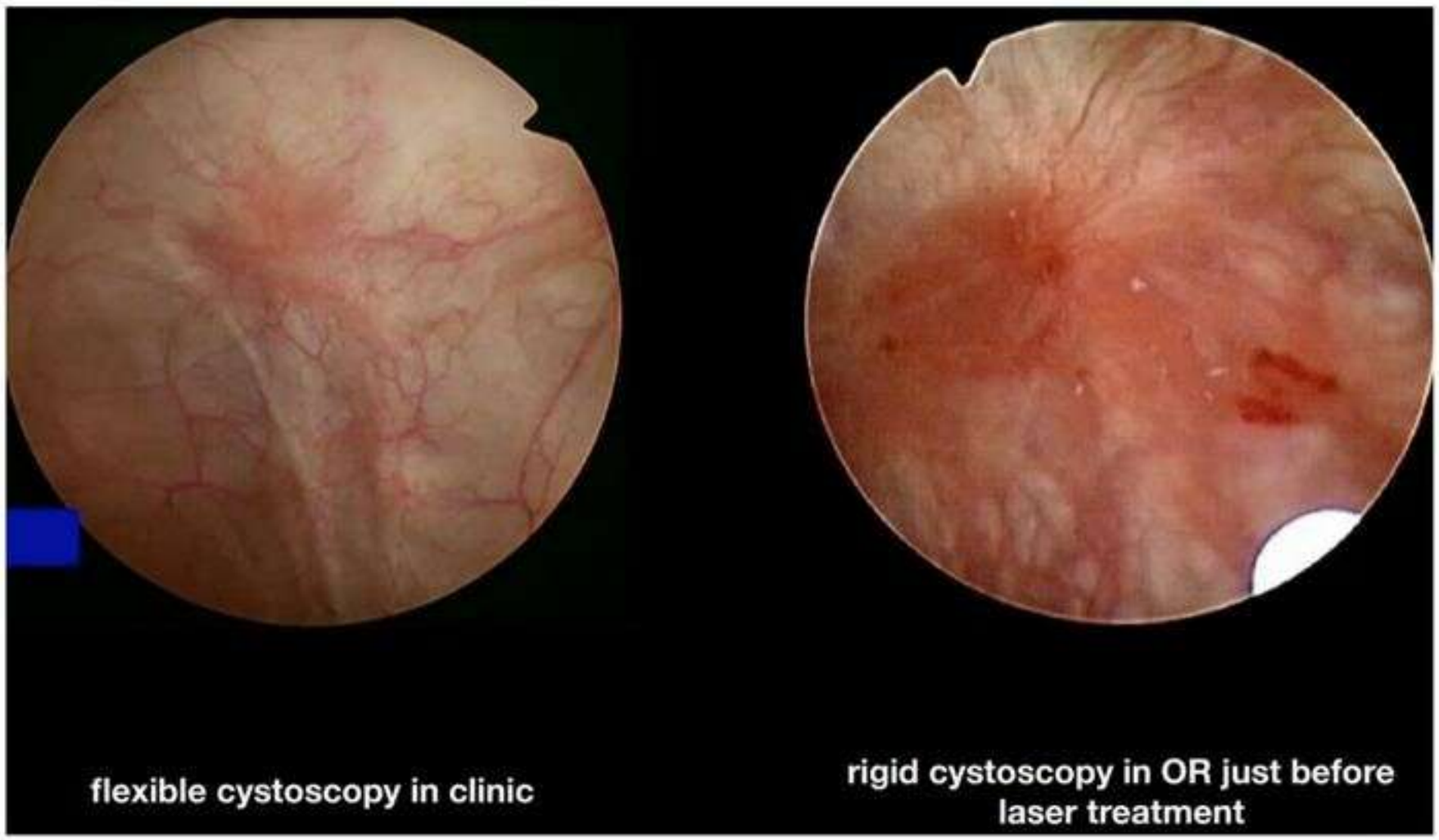
MSMSU 2009

A rather typical, slightly bullous edema develops post-distension with varying peripheral extension.''

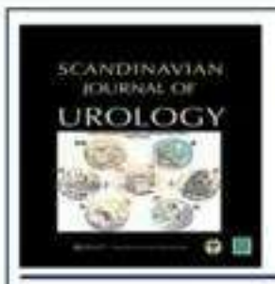


MSMSU 2009

Diagnosis: Subtyping ESSIC type III



Erich Taubert, ESSIC meeting, 2019



Scandinavian Journal of Urology

ISSN: 2168-1805 (Print) 2168-1813 (Online) Journal homepage: https://www.tandfonline.com/loi/isju20

Hunner lesion disease differs in diagnosis, treatment and outcome from bladder pain syndrome: an ESSIC working group report

Magnus Fall, Jørgen Nordling, Mauro Cervigni, Paulo Dinis Oliveira, Jennifer Fariello, Philip Hanno, Christina Kåbjörn-Gustafsson, Yr Logadottir, Jane Meijlink, Nagendra Mishra, Robert Moldwin, Loredana Nasta, Jorgen Quaghebeur, Vicki Ratner, Jukka Sairanen, Rajesh Taneja, Hikaru Tomoe, Tomohiro Ueda, Gjertrud Wennevik, Kristene Whitmore, Jean Jacques Wyndaele & Andrew Zaitcev

- Hunner lesion disease (HLD or ESSIC 3C) differs markedly from other presentations BPS
- Cystoscopy is the method of choice to identify Hunner lesions, histopathology the method to confirm it

Scand J Urol. 2020 Apr;54(2):91-98.

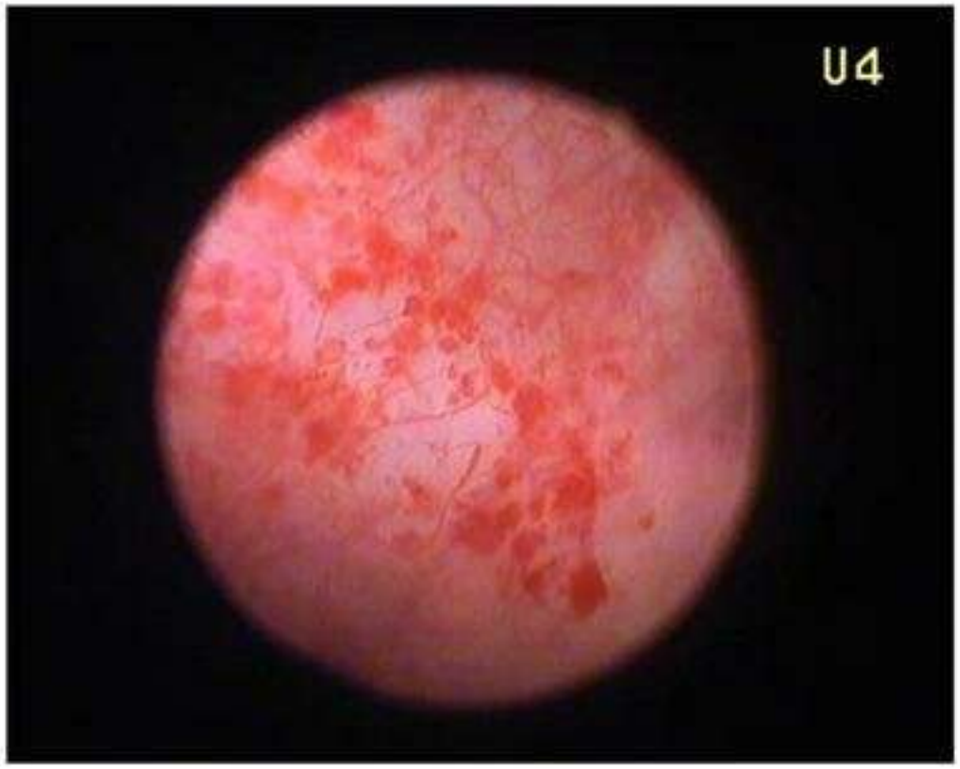
The Role of Glomerulations in Bladder Pain Syndrome: A Review

Gjertrud E. Wennevik,* Jane M. Meijlink, Philip Hanno and Jørgen Nordling

From the Department of Urology (JN), University of Copenhagen (GEW), Copenhagen, Denmark, International Painful Bladder Foundation, Rotterdam, The Netherlands (JMM), and Department of Urology, University of Pennsylvania, Philadelphia, Pennsylvania (PH)

J Urol Vol. 195, 19-25, 2016

We found no convincing evidence in the reviewed literature that glomerulations should be included in the diagnosis or phenotyping of bladder pain syndrome/interstitial cystitis



ESSIC CLASSIFICATION OF BLADDER PAIN SYNDROME TYPES

		cystoscopy with hydrodistension			
		not done	normal	glomerulations[1]	Hunner's lesion[2]
biopsy	not done	XX	1X	2X	3X
	normal	XA	1A	2A	3A
	inconclusive	XB	1B	2B	3B
	positive[3]	XC	1C	2C	3C

[1] cystoscopy: glomerulations grade II-III
[2] with or without glomerulations
[3] histology showing inflammatory infiltrates and/or detrusor mastocytosis and/or granulation tissue and/or intrafascicular fibrosis.

van de Merwe JP, Nordling J, Bouchelouche P, Bouchelouche K, Cervigni M, Daha LK, Elneil S, Fall M, Hohlbrugger G, Irwin P, Mortensen S, van Ophoven A, Osborne JL, Peeker R, Richter B, Riedl C, Sairanen J, Tinzl M, Wyndaele JJ. Diagnostic Criteria, Classification, and Nomenclature for Painful Bladder Syndrome/Interstitial Cystitis: An ESSIC Proposal. Eur Urol 2008;53:60-7.

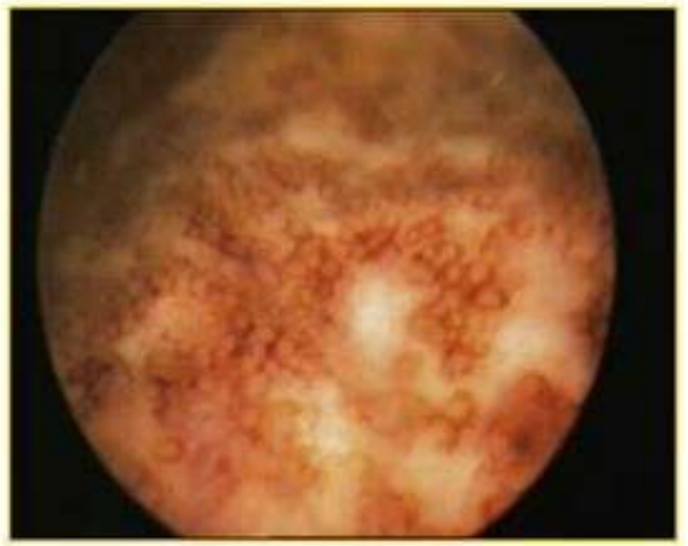
Important cystoscopic parameters

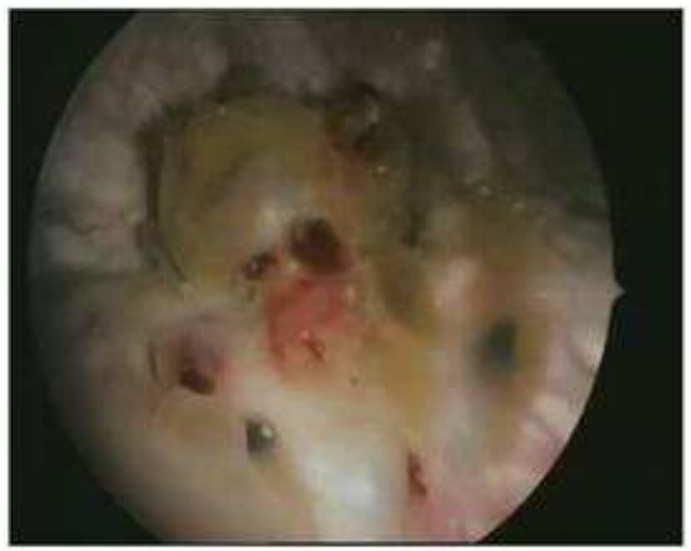
- The changes typically involve the dome, posterior, and lateral walls of the bladder and spare the trigone
- Specify superimposed pressure used
- Volume when Hunner lesion starts to bleed
- Volume when multiple superficial mucosal cracks appear
- Time of distension
- Volume emptied
- Grade of bleeding in distension fluid

Procedure according to ESSIC publication; Eur Urol 45, 662-669, 2004

Biopsy

- Not always
- Exclude other pathologies
  - ✓ Cancer,
  - ✓ Bladder tuberculosis
  - ✓ Endometriosis, etc.
- Provide a morphological support to diagnosis

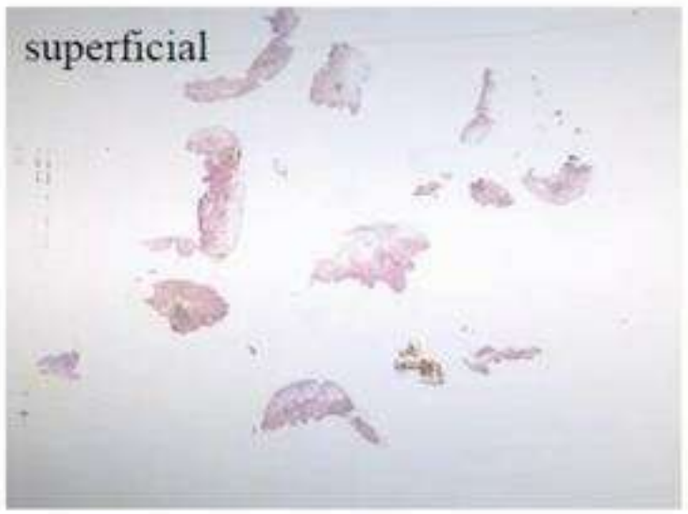


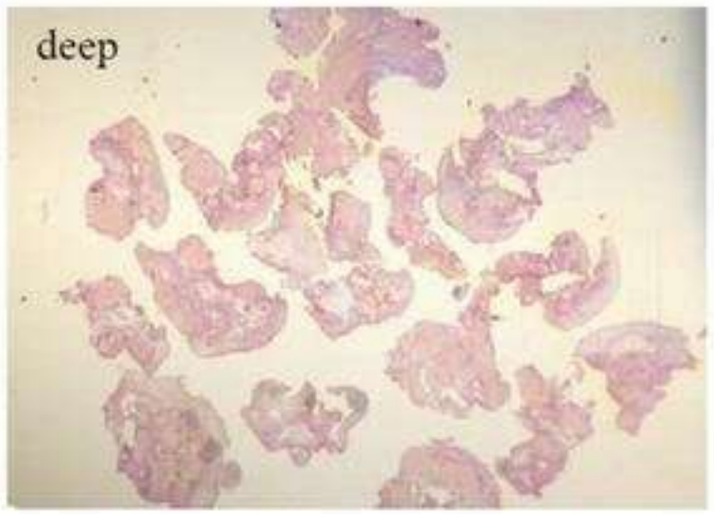


Biopsy

- Carcinoma in situ
- Eosinophilic cystitis
- Tuberculous cystitis
- Chronic follicular cystitis
- Cystitis glandularis
- Squamous cell metaplasia
- Nephrogenic metaplasia

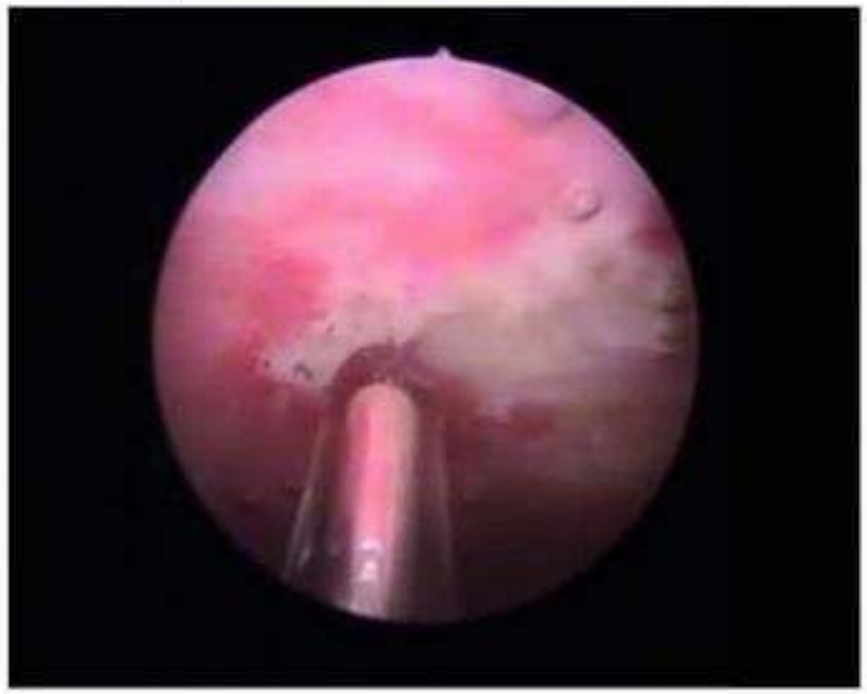
- Biopsies must be deep in order to diagnose BPS/IC

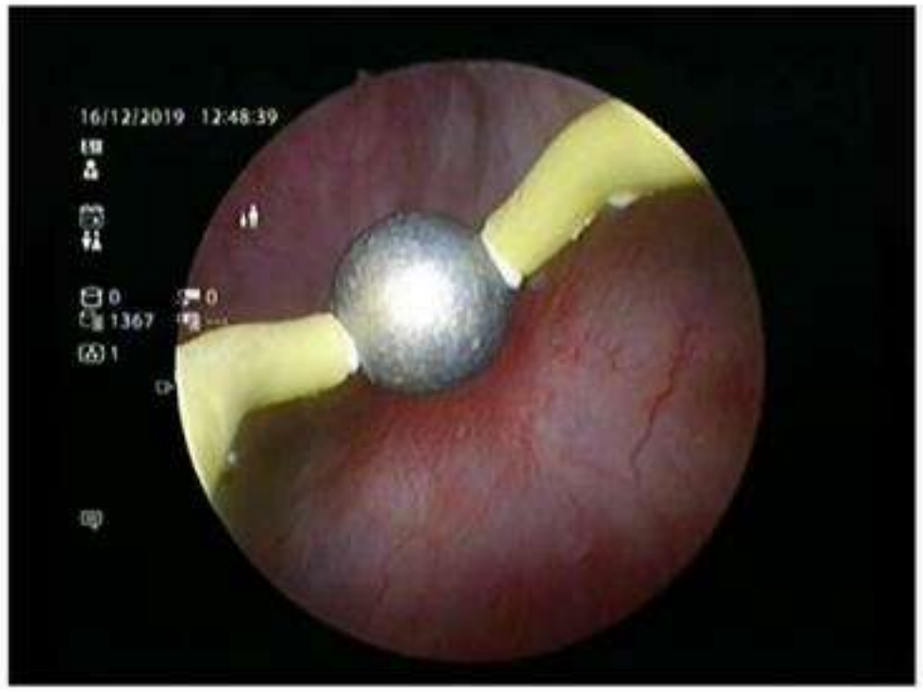




Christina Kåbjörn Gustafsson, MD, PhD

Laser ablation or coagulation



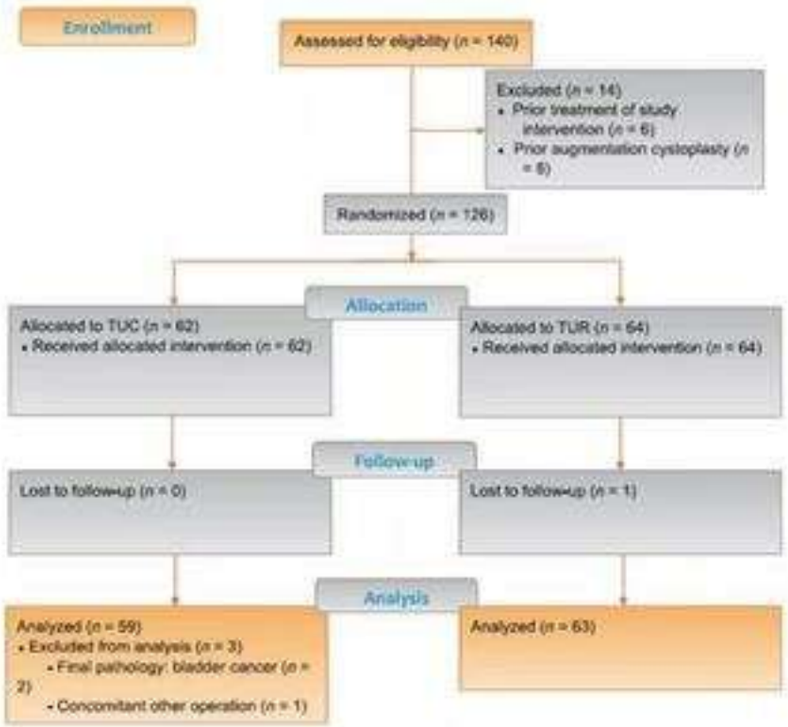


MSMSU 2010

Comparison of the Efficacy Between Transurethral Coagulation and Transurethral Resection of Hunner Lesion in Interstitial Cystitis/Bladder Pain Syndrome Patients: A Prospective Randomized Controlled Trial

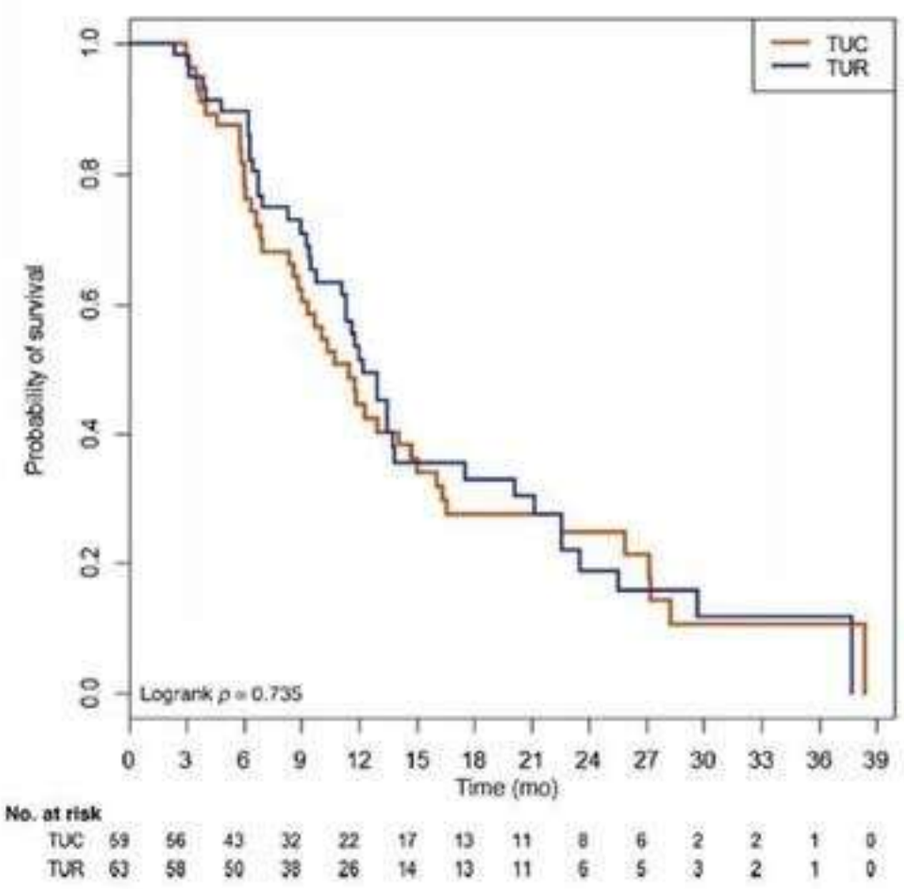
Kwang Jin Ko[a], *Won Jin Cho*[b], *Young-Suk Lee*[c], *Joongwon Choi*[d], *Hye Jin Byun*[d], *Kyu-Sung Lee*[d,e,*]

[a] Department of Urology, Kangnam Sacred Heart Hospital, Hallym University College of Medicine, Seoul, Korea; [b] Department of Urology, Chosun University Hospital, Chosun University School of Medicine, Gwangju, Korea; [c] Department of Urology, Samsung Changwon Hospital, Sungkyunkwan University School of Medicine, Changwon, Korea; [d] Department of Urology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea; [e] Division of Medical Device, Clinical Trial Center, Samsung Medical Center, Seoul, Korea



Eur Urol. 2020;77(5):644-651.

There was no difference in the recurrence-free time and effect on urinary symptoms, including pain between TUC and TUR, for HL.



Risks of Bladder Distension

- The anterior, superior portion of the bladder should be continuously observed for possible rupture during filling
- This is a very rare occurrence but should be suspected when the influx of fluid seems too large and the rate of filling shows no sign of decreasing
- Only exceptionally, any other measure than catheter drainage for about 3 days would be required
- Should bladder distension result in signs of intraperitoneal leakage laparotomy is necessary
- As example of an as extremely rare as serious complication to bladder distension, bladder necrosis has been mentioned

Summary

- Cystoscopic examination with hydrodistention plays a significant role in diagnosing BPS
- Cystoscopy can detect objective changes in the bladder, anatomical volume and help to define future treatment
- When Hanner's lesion is seen bladder biopsy or coagulation must be done

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