ESSIC INTERNATIONAL SCHOOL
1ST EDUCATIONAL COURSE | THE FRENCH EDITION

BPS/IC and Chronic Pelvic Pain: two sides of the same coin?

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30 ppt

SIRATE 32

Same coin?

BPS/IC

CPP/CPPS

Chronic pelvic pain CPP

- Multifactorial condition
- Often poorly managed.
- Management requires knowledge of all pelvic organ systems and their association including musculoskeletal, neurologic, urologic, gynaecologic and psychological aspects
- Multidisciplinary approach.

Impressive list possible causes

How to get succesfully through this jungle ?

Chronic pelvic pain

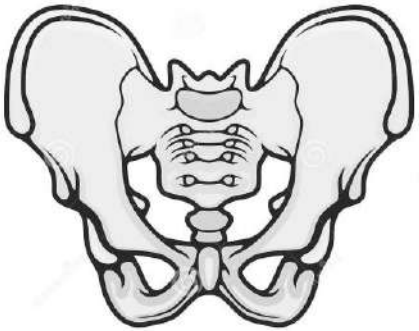
- Many of the mechanisms for the CPP syndromes are based within the **central nervous system** (CNS).
- Although a peripheral stimulus such as infection may initiate the start of a CPP condition, the condition may become **self perpetuating as a result of CNS modulation, independent of the original cause.**
- As well as pain, these central mechanisms are **associated with several other sensory, functional, behavioural and psychological phenomena.**

CPP: possible causes

Articular:
Spine
L5-S1 joint
Pubic symphisis
Sacrococcygeal joint
Hip joint

Fascia
Peritoneum
Endopelvic fascia

Muscular
Psoas
Iliacus
Obturator
Piriformis
Abdominals
Gluteal
Pelvic floor
Adductors
Hamstrings



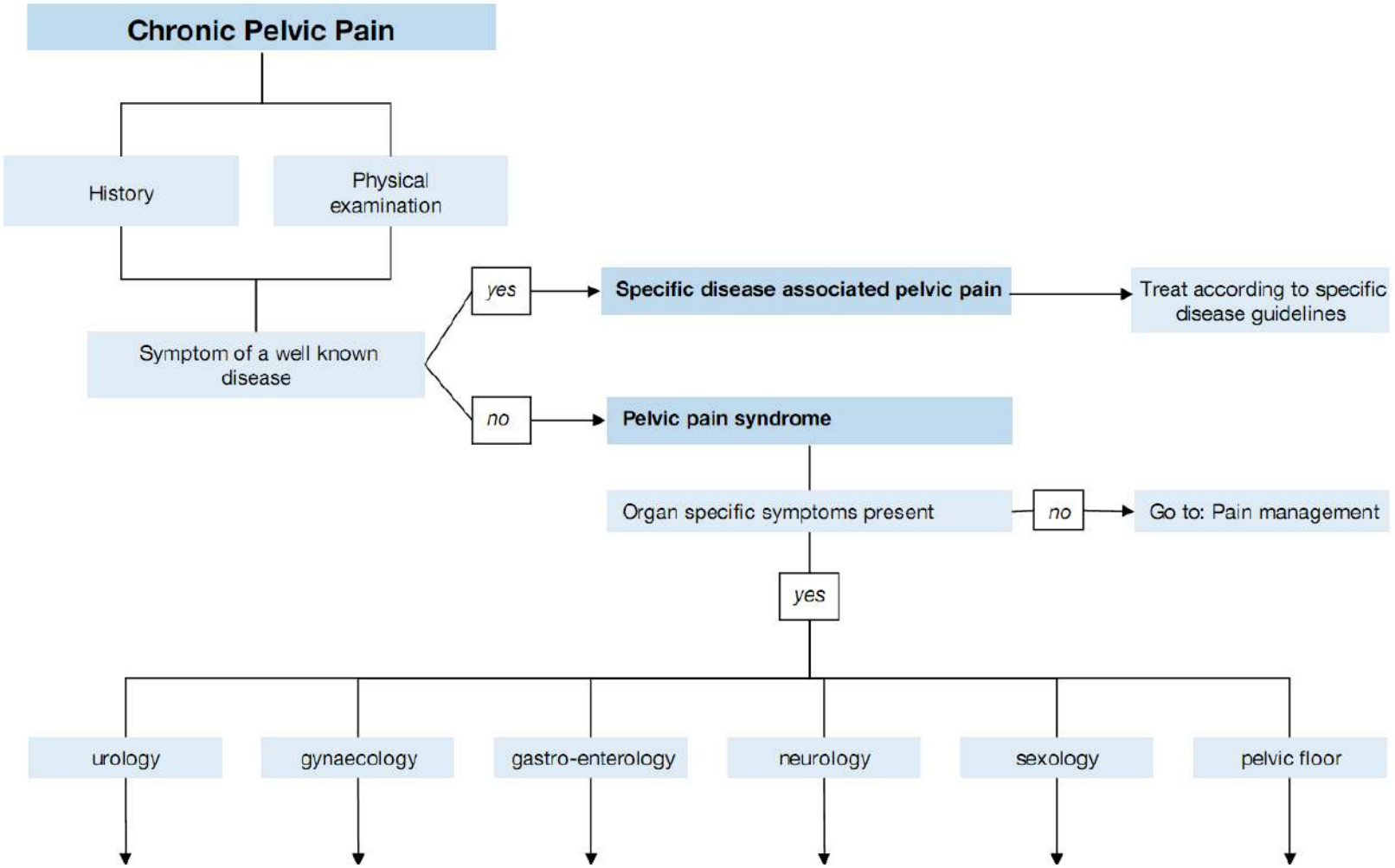
Nerves = lumboscral pelxus
N ilioinguinal
N iliohypogastric
N genitofeora
Lat,fem, cut
Pudendal
Obsturator
Femoral
Sciatic

Vascular:
A&V pudenda
Portal system

Organs:
Kidneys
Bladder
Uterus
Prostate
Ovary
Sigmoid/rectum
Reproductive organs

How to differentiate between causes of CPP

Diagnostic and therapeutic algoritm for CPPS



The Four-Step Plan 4

History + questioning for complaints in systems not mentioned originally

Evaluation of previous data from medical file

Thorough clinical assessment

Extensive clinical assessment of the musculoskeletal system

Quaghebuer and Wyndaele, Scan J Urol 2015;49: 81-89

Diagnosis causes of CPPS: Step 1

- Initial consultation
  - Extended history
    - Age
    - Gender
    - Medical history
    - Profession
    - Marital status
    - Family , relation
    - Social context

Laycock and Haslam in: Therapeutic management of incontinence and pelvic pain: pelvic organ disorders, Springer London 2002

Diagnosis causes of CPP Step 1 and 2

Patient can mostly localise where the pain is felt or indicate the region

Patient can report on symptoms that help direct towards the diagnosis

Comorbid emotional disorders as anxiety, depression, inability to feel pleasure

Serious stress factors can already become apparent

Let the patient talk, look at own made reports and reports of physicians and allied professionals

Navratilova et al ,. J Comp Neurol 2006; 524: 1646-52

Questionnaires

- Developing one specific questionnaire is still going on
- All existing questionnaires have special features
- Validated are
  - Mc Gill (Melzak Anesthesiology 2005; 103: 199-202)
  - Pollard (Pollard Percep Mot Skills 1984; 59: 974)
  - NIH-CPSI (Litwin et al NIH publication 1999: pp464-496)
  - **ICSI** (O'Leary et al Urol 1997; 49: 58-63)
  - PUF (Parsons et al Urol 2002; 60: 573-578)

- From O'Leary MP, et al. 1997. The interstitial cystitis symptom index and problem index. Urol. 49 (suppl 5A): 58-63;
- Sirinian E, et al. 2005 Correlation between 2 interstitial cystitis symptom instruments. J Urol. 173: 835-840.

1.1 Interstitial Cystitis Symptom and Problem Questionnaire (ICSI)

Interstitial Cystitis Symptoms Index (ICSI)

During the past month:

How often have you felt the strong need to urinate with little or no warning:

0. __ Not at all
1. __ Less than 1 time in 5
2. __ Less than half of the time
3. __ About half of the time
4. __ More than half the time
5. __ Almost always

Have you had to urinate less than 2 hours after you finished urinating?

0. __ Not at all
1. __ Less than 1 time in 5
2. __ Less than half of the time
3. __ About half of the time
4. __ More than half the time
5. __ Almost always

How often did you most typically get up at night to urinate?

0. __ Not at all
1. __ Once per night
2. __ 2 times per night
3. __ 3 times per night

Interstitial Cystitis Problem Index (ICPI)

During the past month:

How much has each of the following been a problem for you:

Frequent urination during the day?

0. __ No problem
1. __ Very small problem
2. __ Small problem
3. __ Medium problem
4. __ Big problem

Getting up at night to urinate?

0. __ No problem
1. __ Very small problem
2. __ Small problem
3. __ Medium problem
4. __ Big problem

Need to urinate with little warning?

0. __ No problem
1. __ Very small problem
2. __ Small problem
3. __ Medium problem
4. __ Big problem

Burning, pain, discomfort or pressure in the bladder?

NIH-Chronic Prostatitis Symptom Index (NIH-CPSI)

1. In the last week, have you experienced any pain or discomfort in the following areas?
a. Area between rectum and testicles (perineum) O1 Yes O0 No
b. Testicles O1 Yes O0 No
c. Tip of penis (not related to urination) O1 Yes O0 No
d. Below your waist, in your pubic or bladder area O1 Yes O0 No
e. Below your waist, in your rectal area O1 Yes O0 No
2. In the last week, have you experienced:
a. Pain or burning during urination? O1 Yes O0 No
b. Pain or discomfort during or after sexual climax (ejaculation)? O1 Yes O0 No
3. How often have you had pain or discomfort in any of these areas over the last week?
O0 Never O1 Rarely O2 Sometimes O3 Often O4 Usually O5 Always
4. Which number best describes your AVERAGE pain or discomfort on the days you had it, over the last week?

O0	O1	O2	O3	O4	O5	O6	O7	O8	O9	O10
0	1	2	3	4	5	6	7	8	9	10
No Pain										Pain as bad as you can imagine

5. How often have you had a sensation of not emptying your bladder completely after you finished urinating over the last week?
O0 Not at all
O1 Less than 1 time in 5
O2 Less than half the time
O3 About half the time
O4 More than half the time
O5 Almost always
6. How often have you had to urinate again less than two hours after you finished urinating, over the last week?
O0 Not at all
O1 Less than 1 time in 5
O2 Less than half the time
O3 About half the time
O4 More than half the time
O5 Almost always
7. How much have your symptoms kept you from doing the kinds of things you would usually do, over the last week?
O0 None O1 Only a little O2 Some O3 A lot
8. How much did you think about your symptoms, over the last week?
O0 None O1 Only a little O2 Some O3 A lot
9. If you were to spend the rest of your life with your symptoms just the way they have been during the last week, how would you feel about that?

O0	O1	O2	O3	O4	O5	O6
Delighted	Pleased	Mostly satisfied	Mixed (about equally satisfied and dissatisfied)		Mostly dissatisfied	Unhappy	Terrible

Diagnosis causes of CPP: Step 3

- Detailed physical examination that exceeds the classical routine examination
  - Inspection
  - Palpation
    - Deep
    - superficial
  - Triggering with cotton stick
  - Movement of muscles of pelvic floor
    - Voluntary Force, endurance, exhaustion
  - Neurological assessment of lumbosacral plexus

Step 4: thorough clinical assessment of the musculoskeletal system

- Evaluate viscero-somatic interactions
- Not only pelvis but full spine, pelvic joints, muscles, tendons and pain points
- Domain of osteopathy

CPP ---------- CPPS

- CPP
  - collective term for pain from non malignant origin in the small pelvis, which continues or recurrently occured for 6 months and with little or no success with classical treatment methods
  - Causal treatment

- CPPS
  - no definite cause found = syndrome
  - Symptomatic treatment
- **Exclusion diagnosis**

Fall et al 2008

I find no clear cause of cpp

=

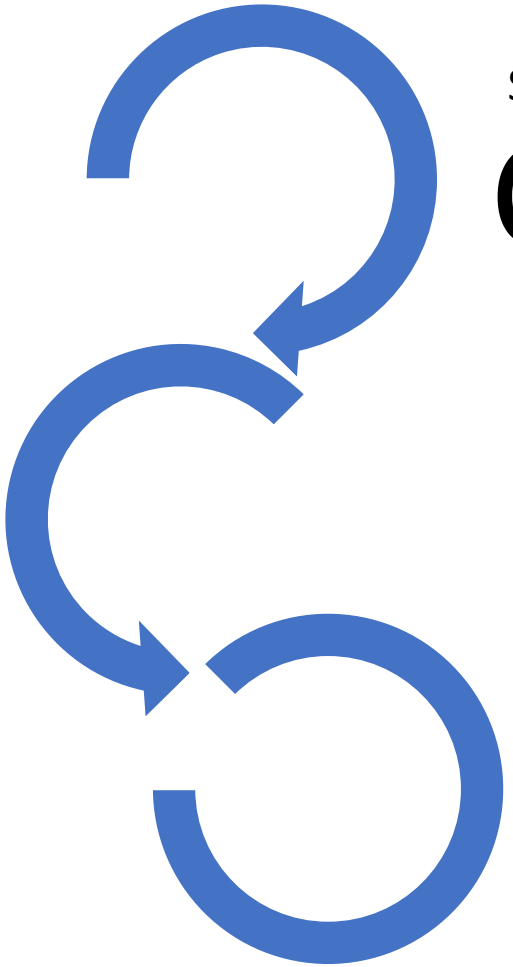
CPPS

Is CPPS BPS/IC?

CPP > BPS/IC Clinical story in short

Story start:

CPP



No cause found:

CPPS

Related to urinary:

BPS/IC

BPS/IC

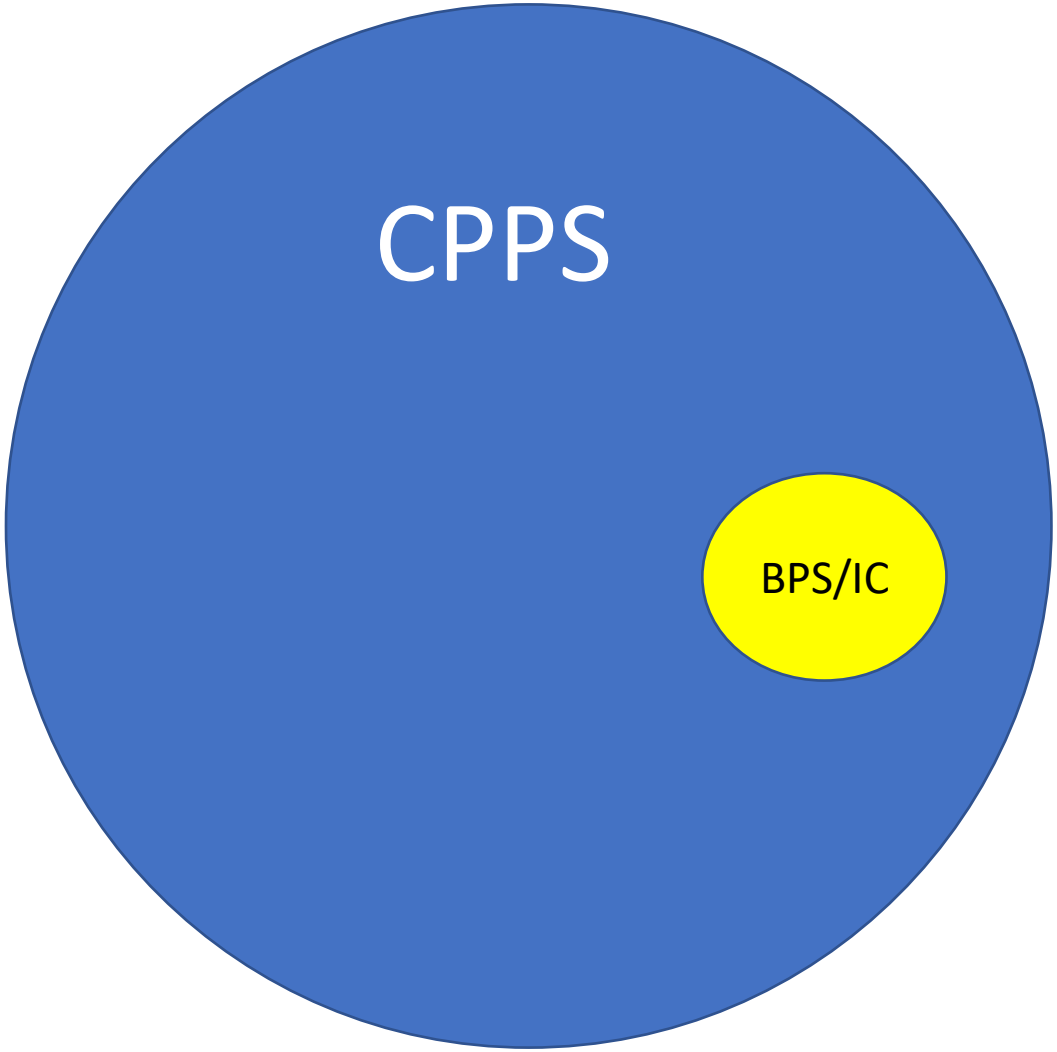
- Persistent or recurrent chronic pelvic pain (> 6 months), pressure or discomfort perceived to be related to the urinary bladder accompanied by at least one other urinary symptom such as an urgent need to void or urinary frequency. (ESSIC)

CPPS

- Pelvic
- 3-6 Months
- No definite cause
- Symptoms related to organ

BPS/IC

- Bladder/LUT
- 6 months
- No definite cause
- LUT symptoms


CPPS
BPS/IC

Bladder Pain Syndrome Clinical picture

- chronic pelvic pain, pressure or discomfort perceived to be related to the urinary bladder
- accompanied by at least one other urinary symptom like persistent urge to void or urinary frequency.
- extremely painful/ distressing condition > 6 months

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Pain related to bladder filling ?

- pain or sensation of pressure or discomfort in the bladder/pelvic area : urethra, vagina, perineum, lower back, lower abdomen, rectum, else where

- The increase of pain on bladder filling not always present.

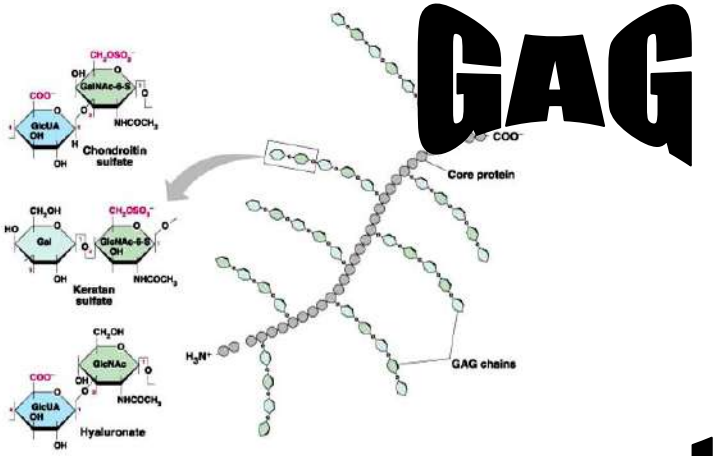
BPS/IC clinical picture

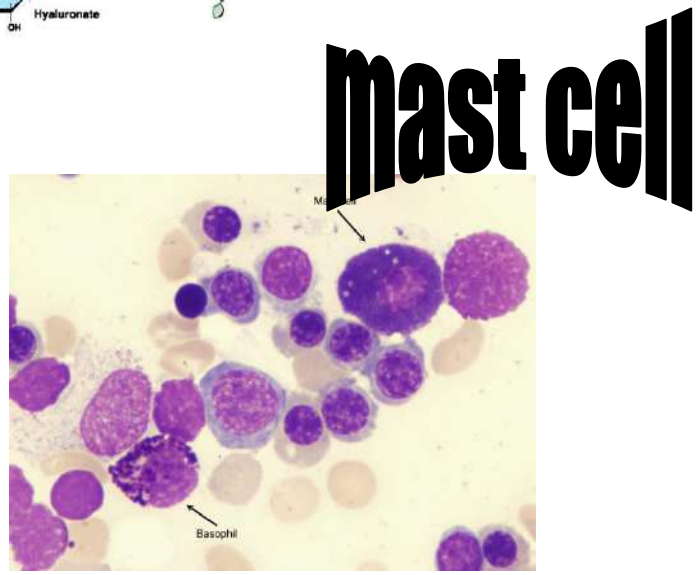
- Frequency of micturition
- No incontinence
- Symptoms persist throughout the night and consequently affect sleep.
- Psycho-social impact

Main formal causal hypothesis

1. Defect in bladder cytoprotection

2. Increased bladder mast cells





Diagnosis summary

Symptoms

Exclusion

2. exclusion/diagnosis confusable diseases

confusable diseases for BPS

carcinoma; carcinoma *in situ*
infection with
- common intestinal bacteria
- *Mycobacterium tuberculosis*
- *Chlamydia trachomatis*
- *Ureaplasma urealyticum*
- *Mycoplasma hominis*
- *Mycoplasma genitalis*
- *Corynebacterium urealyticum*
- Candida species
- *Herpes simplex*
- *Human Papilloma Virus*

radiation cystitis
chemotherapy-induced cystitis
cyclophosphamide-induced cystitis
tiaprofenic acid-induced cystitis
overactive bladder
bladder neck obstruction
neurogenic outlet obstruction
bladder stone
lower ureteric stone
urethral diverticulum
urogenital prolapse
endometriosis
vaginal candidiasis
cervical, uterine and ovarian cancer
incomplete bladder emptying (retention)
prostate cancer
benign prostatic obstruction
chronic bacterial prostatitis
chronic non-bacterial prostatitis
pudendal nerve entrapment
pelvic floor muscle related pain

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2. exclusion/diagnosis confusable diseases

medical history exclude:*

- carcinoma; carcinoma *in situ*
- infection with
  - common intestinal bacteria
  - *Mycobacterium tuberculosis*
  - *Chlamydia trachomatis*
  - *Ureaplasma urealyticum*
  - *Mycoplasma hominis*
  - *Mycoplasma genitalis*
  - *Corynebacterium urealyticum*
  - Candida species
  - *Herpes simplex*
  - *Human Papilloma Virus*
- radiation cystitis
- chemotherapy-induced cystitis
- cyclophosphamide-induced cystitis
- tiaprofenic acid-induced cystitis
- overactive bladder
- bladder neck obstruction
- neurogenic outlet obstruction
- bladder stone
- lower ureteric stone
- urethral diverticulum
- urogenital prolapse
- endometriosis
- vaginal candidiasis
- cervical, uterine and ovarian cancer
- incomplete bladder emptying (retention)
- prostate cancer
- benign prostatic obstruction
- chronic bacterial prostatitis
- chronic non-bacterial prostatitis
- pudendal nerve entrapment
- pelvic floor muscle related pain

* or diagnose if the confusable disease is present

2. exclusion/diagnosis confusable diseases

medical history and physical examination exclude:*

carcinoma; carcinoma *in situ*
infection with
- common intestinal bacteria
- *Mycobacterium tuberculosis*
- *Chlamydia trachomatis*
- *Ureaplasma urealyticum*
- *Mycoplasma hominis*
- *Mycoplasma genitalis*
- *Corynebacterium urealyticum*
- Candida species
- *Herpes simplex*
- *Human Papilloma Virus*

radiation cystitis
chemotherapy-induced cystitis
cyclophosphamide-induced cystitis
tiaprofenic acid-induced cystitis
overactive bladder + urodynamics

bladder neck obstruction
neurogenic outlet obstruction
bladder stone
lower ureteric stone + imaging
urethral diverticulum
urogenital prolapse
endometriosis
vaginal candidiasis
cervical, uterine and ovarian cancer
incomplete bladder emptying (retention)
prostate cancer + PSA
benign prostatic obstruction
chronic bacterial prostatitis
chronic non-bacterial prostatitis
pudendal nerve entrapment
pelvic floor muscle related pain

* or diagnose if the confusable disease is present

2. exclusion/diagnosis confusable diseases

routine and special bacterial cultures of urine:*

carcinoma; carcinoma *in situ*
infection with
- common intestinal bacteria
- *Mycobacterium tuberculosis*
- *Chlamydia trachomatis*
- *Ureaplasma urealyticum*
- *Mycoplasma hominis*
- *Mycoplasma genitalis*
- *Corynebacterium urealyticum*
- Candida species
- *Herpes simplex*
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radiation cystitis
chemotherapy-induced cystitis
cyclophosphamide-induced cystitis
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chronic bacterial prostatitis
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pelvic floor muscle related pain

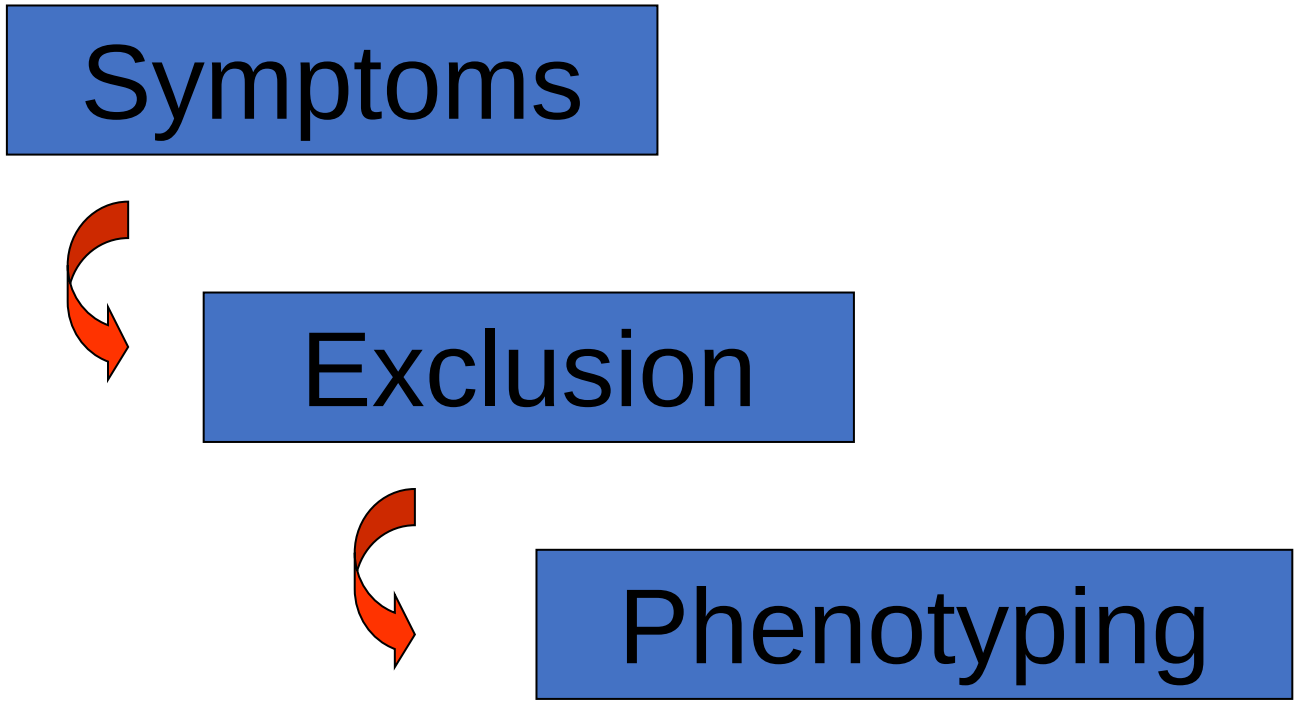
* or diagnose if the confusable disease is present

Validated IC symptom instruments

- O'Leary-Sant interstitial cystitis symptoms and problem index questionnaire + sexual score (Int J Urol 10, S26, 2003)

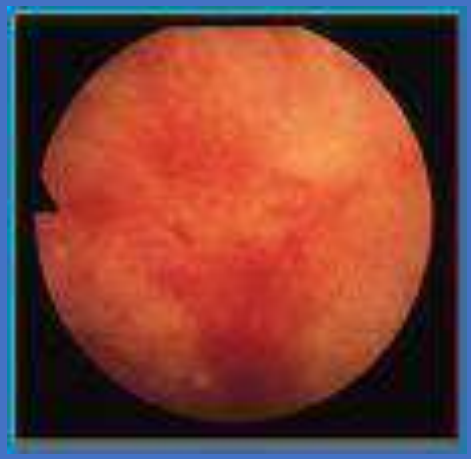
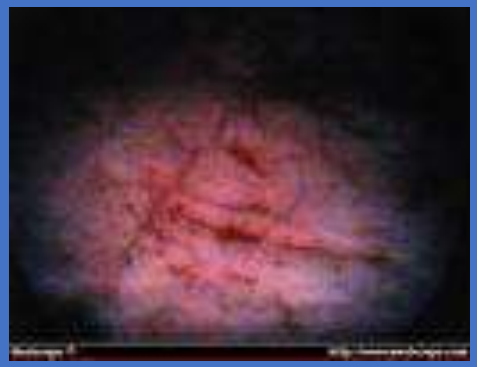
- Visual analogue Score for grading pain
- Voiding diaries

Diagnosis summary



Cystoscopy under anesthesia with hydrodistension ?

- Hunner’s lesion
- Diffuse bleeding after filling till 80-100 cm H2O pressure
- Glomerulations highly associated with over expression of angiogenic growth factors in the bladder.
- Tamaki et al. J Urol 2004,172:945-948

Hunner’s lesion

2. exclusion/diagnosis confusable diseases

cystoscopy with biopsy if necessary exclude:*

- carcinoma; carcinoma *in situ*
- infection with
  - common intestinal bacteria
  - *Mycobacterium tuberculosis*
  - *Chlamydia trachomatis*
  - *Ureaplasma urealyticum*
  - *Myco*
  - *Myco*
  - *Corynebacterium urealyticum*
  - Candida species
  - *Herpes simplex*
  - *Human Papilloma Virus*
- radiation cystitis
- chemotherapy-induced cystitis
- cyclophosphamide-induced cystitis
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- overactive bladder + urodynamics
- bladder neck obstruction
- neurogenic outlet obstruction
- bladder stone or + imaging
  - lower ureteric stone + imaging
  - urethral diverticulum
  - urogenital prolapse
  - cervical, uterine and ovarian cancer
- incomplete bladder emptying (retention)
  - prostate cancer + PSA
- benign prostatic obstruction + pressure flow
  - chronic bacterial prostatitis
  - chronic non-bacterial prostatitis
  - pudendal nerve entrapment
  - pelvic floor muscle related pain

all confusable diseases have been excluded

* or diagnose if the confusable disease is present

Biopsy ?

- ESSIC diagnostic criteria

  Nordling J, et al. Eur Urol. 2004 ; 45: 662-669

- Mast cells in detrusor, lamina propria and epithelium= no strict criterium

Biopsy

- Permits identifying subgroups
  - Mastocytosis: R/ antihistaminics ..
  - Reduced capacity and scar tissue : R/ surgery ..
- Exclude CIS , TBC Cystitis

Types – Classification

Classic/ulcer = destructive inflammation eventually small fibrotic bladder

Ulcer <-> non Ulcer

50 % / 50 %

Koziol et al 1996

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cystoscopy with hydrodistension					
Biopsy		**Not done**	**Normal**	**glomerulations grade II-III**	**Hunner lesion with or without glomerulations**
	not done	XX	1X	2X	3X
	normal	**XA**	**1A**	**2A**	**3A**
	inconclusive	**XB**	**1B**	**2B**	**3B**
	positive	**XC**	**1C**	**2C**	**3C**

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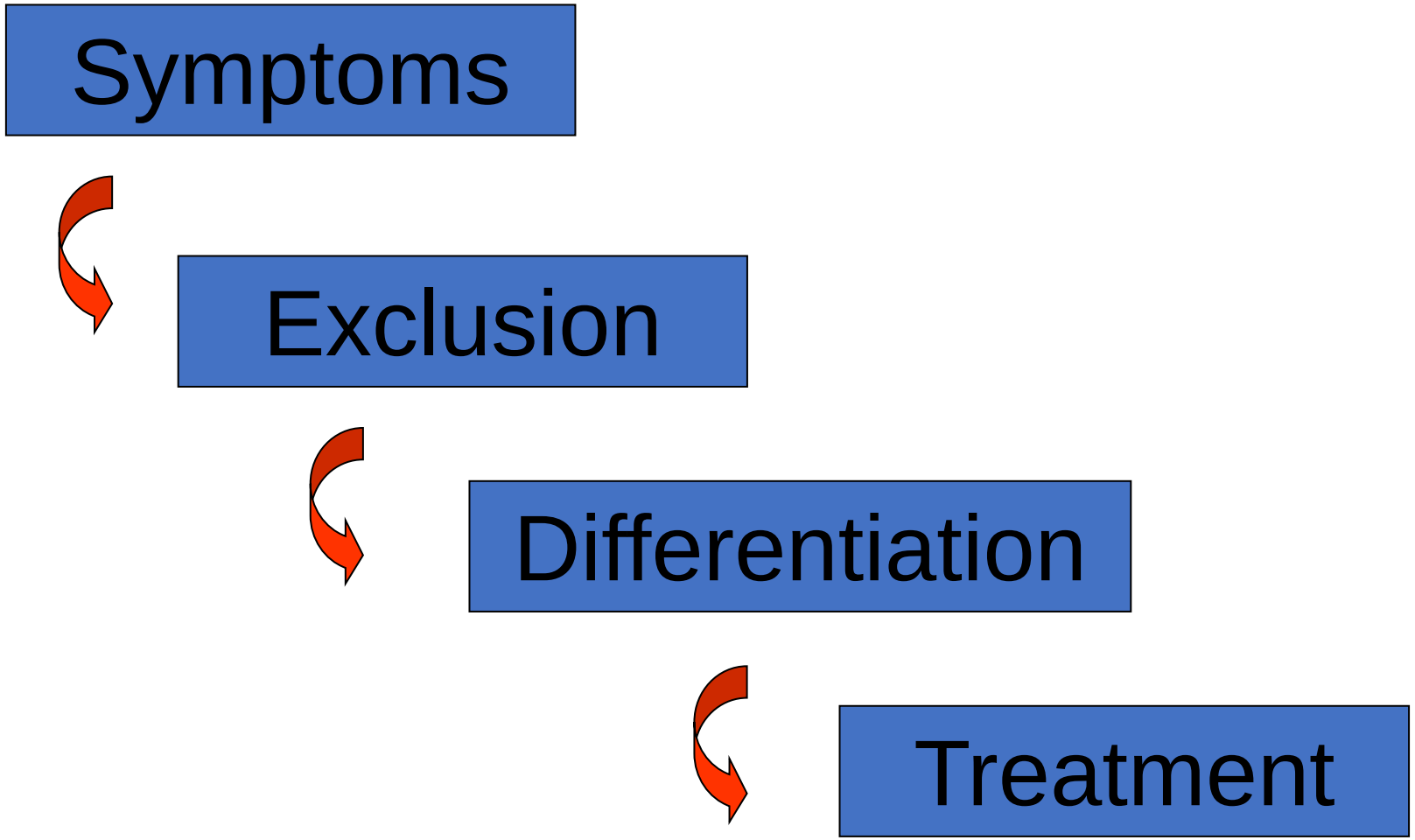
cystoscopy with hydrodistension					
Biopsy		**Not done**	**Normal**	**glomerulations grade II-III ?**	**Hunner lesion with or without glomerulations ?**
	not done	XX	1X	2X	3X
	normal	**XA**	**1A**	**2A**	**3A**
	inconclusive	**XB**	**1B**	**2B**	**3B**
	Positive ?	**XC**	**1C**	**2C**	**3C**

Diagnosis summary



BPS/IC one of many CPPS coins

Thanks for the attention