

MedicineHx–Genitourinary System

History of “Lower Urinary Tract Symptoms”

A. Overview:

- Lower urinary tract symptoms (LUTS) are either storage, voiding or post micturition symptoms affecting the lower urinary tract. Prevailing guidelines suggest that the pathogenesis of LUTS is multifactorial and can include one or several diagnoses, commonly benign prostatic obstruction, nocturnal polyuria and detrusor muscle instability.
- **Pain in the urinary tract** is either due to distention or inflammation. (e.g. urinary retention, ureteric obstruction). Severity of pain is usually related to rapidity of distention rather than the degree of distention. (Chronic distention is usually painless)

Different types according to the site

1. **Ureteral Pain** (Usually acute and secondary to obstruction, the site of obstruction e.g. ureteral stones) (Mid ureter, lower ureter) can be determined by site of referred pain and/or associated symptoms (LUTS)
2. **Vesical pain** (Most often by over distention of the UB)
 - Constant Suprapubic (SP) (Pain that is not related to Acute Urinary Retention is seldom of Urologic origin)
 - Intermittent SP (Pain is usually related to inflammatory conditions (e.g. Acute Cystitis, Interstitial Cystitis), Worse when the bladder is full and partially relieved by bladder emptying)
 - Bacterial Cystitis (Pain may be referred to distal Urethra)
3. **Prostatic pain**
 - Usually secondary to inflammatory conditions and in the perineum (e.g. Acute Prostatitis)
 - Referred to lumbosacral spine, inguinal canals or lower extremities. Associated Irritative lower urinary tract symptoms ± Urinary retention
4. **Penile and testicular pain**
 - Flaccid Penis: Pain is usually 2ndy to inflammation of Venereal diseases or Paraphimosis.
 - Erect Penis: Usually due to Peyronie’s disease or Priapism
 - Primary Acute Testicular Pain arises with acute intrascrotal pathology e.g. Trauma, Torsion, Infections.
 - Chronic testicular pain caused by Hydrocele or Varicocele (is usually dull, heavy sensation, does not radiate)
 - Referred Testicular pain is usually from Renal or retroperitoneal pathology with normal scrotal examination

N.B: This table can help you to memorize the symptoms in a sequence while taking history.

- Voiding symptoms: Symptoms that occur at the time of urination.
- Storage symptoms: Symptoms that occur during bladder storage and filling.

Symptom	Before urination	During urination	After urination
Storage (Irritative)	<ul style="list-style-type: none"> • Frequency • Urgency • Incontinence • Urge Incontinence 	<ul style="list-style-type: none"> • Dysuria 	<ul style="list-style-type: none"> • -----
Voiding (Obstructive)	<ul style="list-style-type: none"> • Hesitancy 	<ul style="list-style-type: none"> • Poor stream • Interruption of urine • Straining 	<ul style="list-style-type: none"> • Dribbling • Incomplete voiding

1. Incontinence		
Stress incontinence	Instantaneous leakage of urine after the stress of coughing or after a sudden rise in intra-abdominal pressure of any cause	
Urge incontinence	intense urge to urinate and then leakage of urine in the absence of cough or other stressor	
Total (continuous) incontinence	frequent leaking of <u>small amounts of urine</u> from neurological disease	Bladder is always full and excess urine leaks
Overflow incontinence	The involuntary <u>release of urine</u> from an overly full urinary bladder.	Once bladder is full, it empties itself without control (like in infants)

2. Enuresis	Urinary incontinence typically in children who are big enough to know how to go to toilet. It could be nocturnal or diurnal.
3. Polyuria	large volumes of urine with an increase in urinary frequency (>3 Liters)
4. Oligouria	Passing a reduced urine volume (<400 mL/day in adults)
5. Urinary retention	Inability to pass urine.
5. Pneumaturia	Passage of gas or "air" in urine (bubbles)

B. Differential diagnosis:

DDx	What support this diagnosis?
“Irritating pathology”	
Kidney/Ureteral stones	Risk factors: Dehydration, high intake of Na, Crohn’s disease Typical Symptoms: renal colic, hematuria, urgency
UTI	Risk factors: Female, Pregnancy, Diabetes, Indwelling catheter and LUT obstruction Typical Symptoms: vague with incontinence, a change in mental status, fatigue
“Obstructing pathology”	
Prostatitis	Risk factors: young or middle-aged man, dehydration, Being under stress Typical Symptoms: Frequent urge to urinate, Difficulty urinating, Chills and fever
BPH	Risk factors: increase circulating level of testosterone, aging Typical Symptoms: Voiding symptoms
“Neurological pathology”	
Bladder sphincter dyssynergia	Risk factors: Multiple sclerosis, Spinal injury Typical Symptoms: Daytime and night time wetting, urinary retention, Urinary tract and bladder infections.

C. Questions to Ask the Patient with this presentation

Questions	What you think about ... !
Voiding and storage symptoms “e.g. character, quality, duration... etc”	
Are you urinating more frequently than usual during the day?	-Bladder inflammation or infection -Benign prostatic hyperplasia -Neurologic disease
Do you feel a strong sensation that you need to urinate immediately?	-UTI -Bladder cancer -Radiation damage -Neurogenic bladder dysfunction
Is the urge to urinate so immediate that you sometimes urinate before you can get to the bathroom?	-Acute cystitis -Upper motor neuron lesions -Multiple sclerosis, Parkinson’s disease
Do you have pain during urination? If yes the How long have you had this pain?	• 1–2 days? Bacterial cystitis Acute bacterial prostatitis Bacterial epididymitis • 2–7 days? Urethritis/epididymitis (gonorrhea, chlamydia, herpes simplex virus)

	<ul style="list-style-type: none"> • More than 14 days? Chlamydia infection (in women) • Weeks to months? Interstitial cystitis Chronic bacterial prostatitis
At what point during urination does your pain occur?	<ul style="list-style-type: none"> • At the beginning of urination? Urethritis • At the end of urination? Cystitis or prostatitis
Is your urinary stream weaker than usual?	Voiding symptoms (For men) weak or intermittent stream, hesitancy, dribbling, and dysuria commonly occur with bladder outlet obstruction from benign prostatic hyperplasia or urethral stricture.
Do you experience dribbling or slow urine flow at the end of urination?	
Does it take longer than usual to begin urination?	
Is the amount of urine with each episode less than Bladder inflammation from infection, irritants, systemic usual?	-Interstitial cystitis
Do you have pain with urination without frequency or urgency	-Urethritis
Pain (Check page 1 and don't forget to use SOCRATES)	
Hematuria	
Have you noticed any change in the urine color?	Gross: The presence of blood in the urine in sufficient quantity to be visible to the naked eye Microscopic: 2–3 red blood cells per high-power field on urine microscopy
When you pass red urine is it painful or painless If it is painful, is it painful before urination or after?	Painless hematuria should be regarded as a symptom of urologic malignancy until proven otherwise Before: Stone After: Clot colic due to arteriovenous malformation, malignancy, or other causes
When does red urine occur? Before or after urination	At the beginning: urethral causes. Late: trigone of the bladder, or its neck. Total: any site other than the bladder or the urethra.
Severity: The duration: The presence of clots, try to describe its shape. The color of urine:	the longer, the danger. the darker the urine, the more severe the case.
Hemospermia:	Presence of blood in semen and it's usually a benign condition. R/O Prostate infection (TB) or cancer if symptoms suggest UT pathology

D. Review of symptoms related to the system of interest.

- Pain
- Hematuria
- Hematospermia
- Incontinence
- Enuresis
- Polyuria
- Oligouria
- Urinary retention
- Pneumaturia

Constitutional symptoms:

- Fever
- Sweating
- Loss of appetite
- Loss of weight
- Chills and rigors
- Fatigability.

E. Systemic review Go to Medicine – Hx – “General” topic!

432 OSCE TEAM

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