HISTORY AND PHYSICAL EXAMINATION - UROLOGY

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urology

- Urology is the field of medicine that deals with disorders or conditions affecting the urinary tract and the male reproductive tract.
- Urological admissions account for one third of surgical admissions.
- Subspecialties include (urodynamics / stone diseases/ paediatric/ reconstructive/ andrology / oncology/minimal invasive / renal transplant …etc

anatomy

- The urinary tract :

1- two kidneys : lie retroperitoneally from T12-L3 right kidney is usually

lower due to the presence of liver.

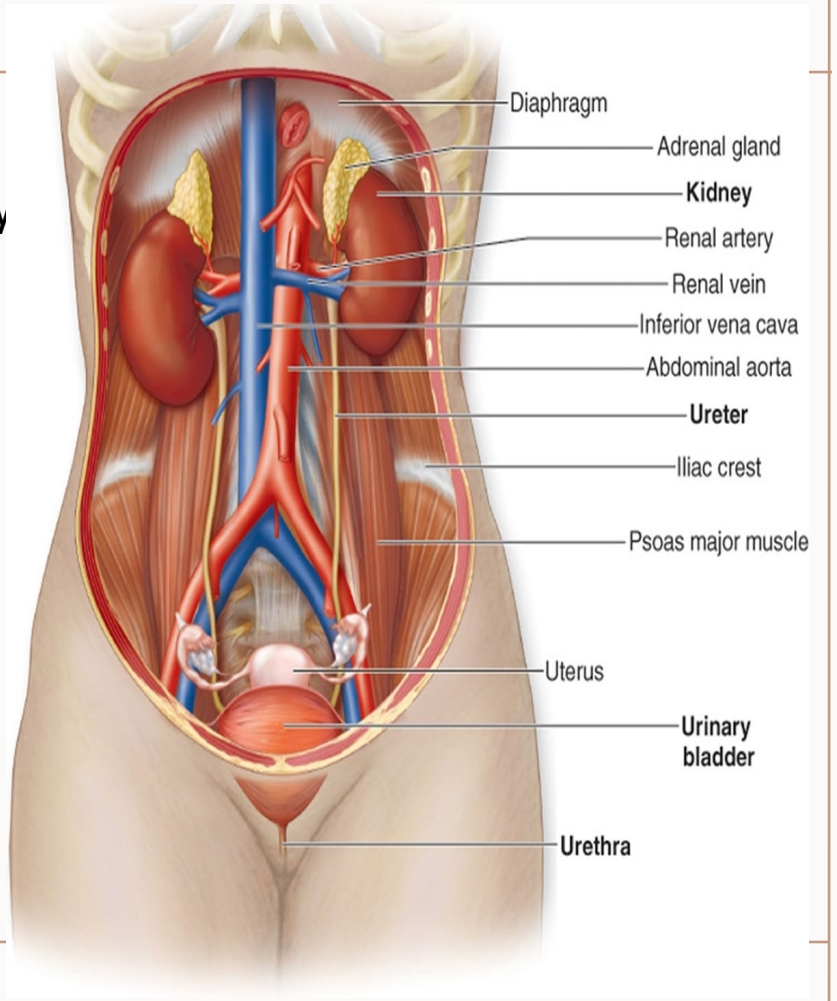
2- two ureters : Two thick tubes that act to transport urine

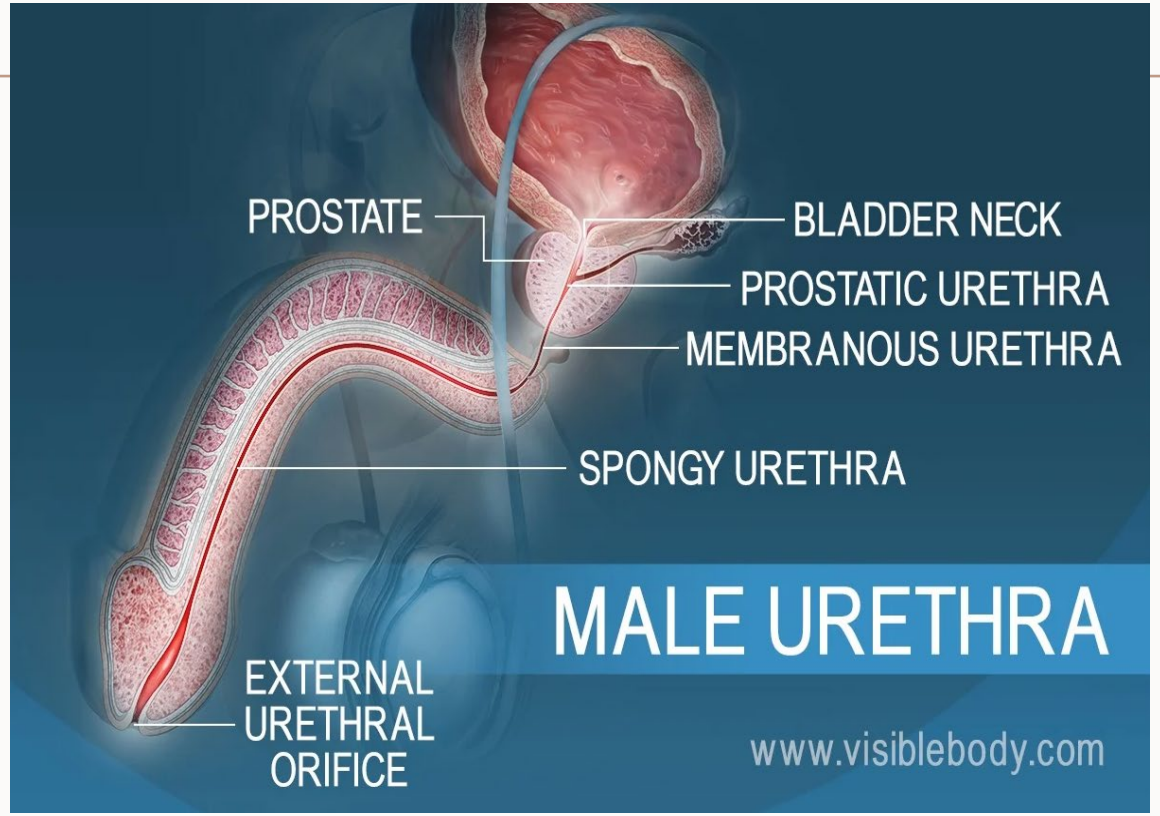
to the bladder… 25cm long

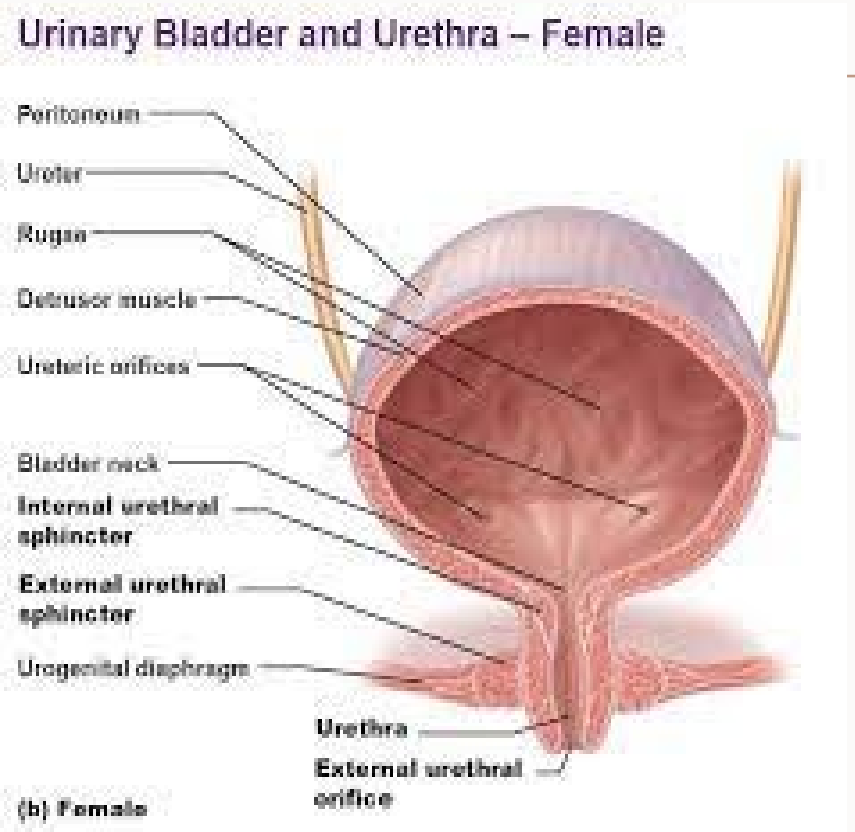
3- urinary bladder : voiding and storage phases

4- urethra :

- Male urethra : 17-20 cm .. 3 parts (prostatic , membranous , penile)
- Female urethra : 4 cm




PROSTATE
BLADDER NECK
PROSTATIC URETHRA
MEMBRANOUS URETHRA
SPONGY URETHRA
MALE URETHRA
EXTERNAL URETHRAL ORIFICE
www.visiblebody.com


Urinary Bladder and Urethra – Female
Peritoneum
Ureter
Rugae
Detrusor muscle
Ureteric orifices
Bladder neck
Internal urethral sphincter
External urethral sphincter
Urogenital diaphragm
Urethra
External urethral orifice
(b) Female

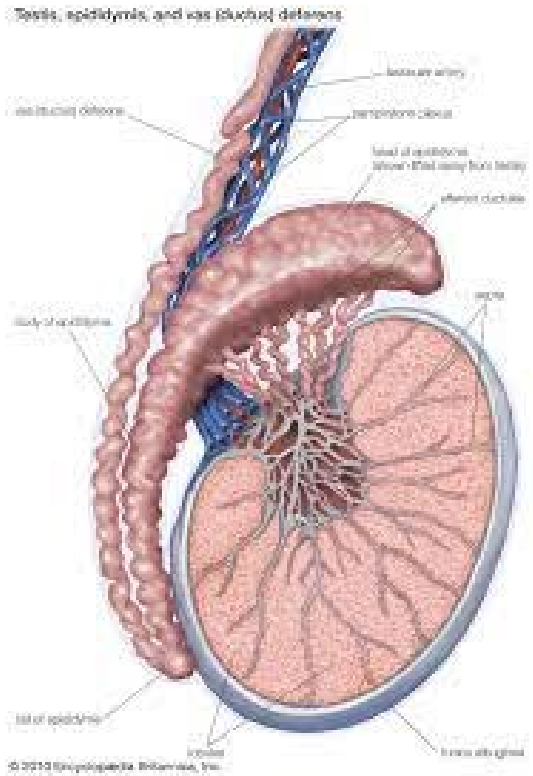
male genitalia

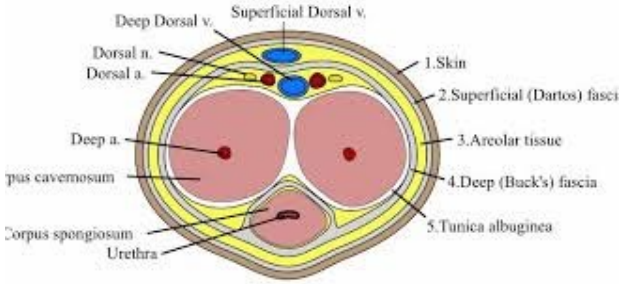
- The penis (root/ body/ glans)
- The scrotum :

- testis : production

- epididymis : storage

- spermatic cord





HISTORY TAKING

GENERAL HISTORY TAKING

1- patients profile (name, age, marital status ,address ,occupation)

2- history of presenting complaint (urinary symptoms / genital or pelvic pain / genital swelling/sexual dysfunction and infertility)

3- past medical and surgical history

- chronic diseases, rheumatoid , STDs , infertility
- CVS / endocrine / neurologic/ psychiatric diseases
- urological procedures including neonatal / pelvic operations

4- past drug history

- note drugs such as diuretic, alpha blockers , antihypertensives , antidepressants and antipsychotics

5- family history : urological cancers , BPH

6- social history :

- smoking , alcohol , recent travel, sexual history.

URINARY SYMPTOMS

- *PAIN PRESENTATIONS*

1- Loin pain :

- Renal causes : renal and ureteric stones (m.c) ,infection (pyelonephritis) , tumour , bleeding
- Non renal causes : Leaking aortic aneurysm , ectopic pregnancy ,appendicitis , cholecystitis , bowel obstruction , muscle spasm

-Acute pyelonephritis : clinical dx (fever , loin pain , chills ,rigor, nausea , vomiting)

-Renal and ureteric colic : usually due to obstructing stone , caused by distention of renal capsule, very sever , spasmodic , lumbar region; radiates to abdomen, groin, testes, thigh . Maybe associated with vomiting and sweating.

2-Suprapubic pain

urinary : UTI, ureteric stone, urinary retention, bladder rupture

non urinary : appendicitis, diverticulosis, ovarian cysts, constipation

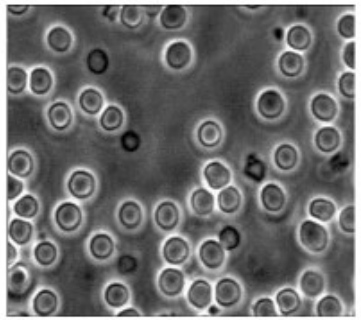
- *Hematuria*

the presence of RBCs in the urine

- Macroscopic (gross) haematuria is visible to the naked eye (red urine ,overtly bloody, smoky or blood clots)

- Microscopic or dipstick haematuria is when blood is identified by urine microscopy or dipstick testing

Gross Hematuria



Urine Micrscopy

Dipstick urinalysis

9.8 Causes of haematuria

Painless

- Glomerulonephritis
- Tumours of the kidney, ureter, bladder or prostate*
- Tuberculosis*
- Schistosomiasis*
- Hypertensive nephrosclerosis
- Interstitial nephritis (unless very acute/severe)
- Acute tubular necrosis
- Renal ischaemia (renovascular disease)
- Distance running or other severe exercise
- Coagulation disorders, anticoagulant therapy

Associated with pain

- Urinary tract infection
- Renal stones with obstruction
- Loin pain-haematuria syndrome

May be either

- Urinary tract infection
- Reflux nephropathy and renal scarring
- Adult polycystic kidney disease
- Renal stones without obstruction

*Painless provided there is no acute obstruction of the urinary tract.

Timing of Hematuria :

- **Total** : Above bladder neck (bladder , ureters and kidneys)

- **Terminal** : Prostatic urethra and neck of bladder

- **Initial** : Anterior urethra

- Polyuria : abnormally large volume of urine, and is most commonly due to excessive fluid intake .
- Oliguria : reduction in urine volume to <800 ml/day , Acute renal failure
- Anuria : total absent of urine production
- Pneumaturia : passing gas bubbles in the urine
- Nocturia : frequent need to get up and urinate at night . Awakening 2 or more times at night considered as nocturia
- Enuresis (bed wetting) in that the person does not wake and the bladder empties.
- Nocturnal polyuria (NP) refers to a condition in which the rate of urine output is excessive only at night and total 24-hour output is within normal limits.

- *Lower Urinary Tract Symptoms (LUTS)*

1. Filling (Storage) or irritative symptoms :

- Frequency : micturating more often with no increase in the total urine output.

- Urgency : a sudden strong non-resistible desire to pass urine

- Dysuria : painful urination

- Nocturia and nocturnal enuresis

- Incontenence

2- Voiding or obstructive symptoms :

- Poor stream (unimproved by straining)
- Hesitancy :difficulty in the initiation of urination
- Terminal dribbling and post voiding dribbling
- Incomplete voiding
- Urinary retention : inability to pass urine
- Intermittency and interrupted voiding : urine flow increased with each abdominal straining

• Incontenence

- Involuntary leakage of urine

1- Urge Urinary Incontinence (UUI) : Involuntary leakage of urine preceded by sudden desire to void (urgency)

2- Stress Urinary Incontinence (SUI) : Urine leakage associated with increased abdominal pressure laughing, sneezing, coughing, climbing stairs ..etc), more in women , seen in men after prostate cancer surgery .

3- Mixed incontinence : A combination of stress and urge incontinence.

4- Overflow incontinence: increased residual or chronic urinary retention leads to urinary leakage from bladder overdistention.

5- Functional incontinence : loss of urine related to deficits of cognition and mobility (eg, delirium, psychiatric disorders, impaired mobility)

6- Continuous incontinence :continuous urine flow associated with fistulas (vesicovaginal , urethrovaginal) and ectopic ureter inserted distal to external sphincter

Scrotal swelling

- painful : torsion of testis, torsion of appendages, orchitis, epididymitis.
- painless : testicular cancer, varicocele, hematocele, hydrocele
- always keep hernia in mind
- *Sudden onset of unilateral scrotal pain should be treated as testicular torsion until proven otherwise*

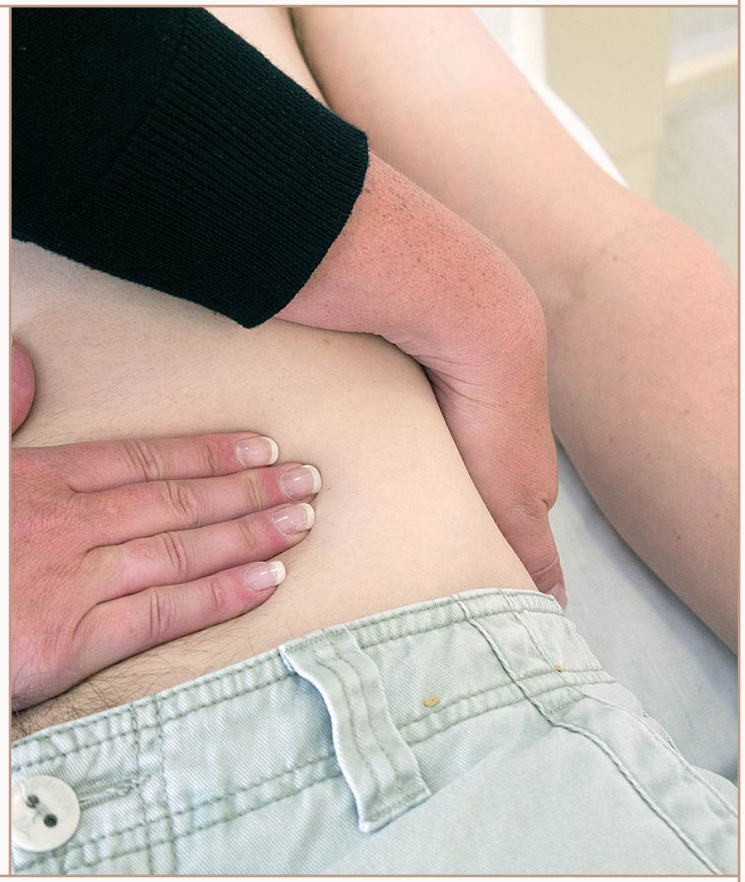
it occurs most commonly between 10-30 yrs , acute pain that's not relieved by lying still ,associated with nausea and vomiting

- *epididymo-orchitis : insidious in onset dull ache initially associated fever dysuria and urethral discharge worst when standing or moving around*

PHYSICAL EXAMINATION

Abdominal exam

- Basic steps (well lit room – identify yourself , exposure from xyphoid to mid-thigh ,name and age of the patient ,permission , chaperone)
- 1- kidney : inspection and palpation as part of abdominal exam
- ballot of the kidneys : left hand behind the patient's back below the ribs ,right hand on anterior abdominal wall just below the costal margin , press upward with your left hand and downward with your right hand ask the patient to take a deep breath .
- In healthy individuals the kidneys are not usually ballotable
- an enlarged kidney is usually ballotable



- 2- bladder

the bladder is palpable when it is full , you can palpate the bladder in supra pubic area .

felt as rounded swelling and dull to percussion , tender in UTI or retention

EXAMINATION OF THE GENITALIA

- EXAMINATION OF THE GENITALIA
- 1- inspection (penis , groin, abdomen):
- Skin changes: bruising, swelling, warts , erythema ,Scars ,Masses ,Swelling, erythema , Bruising , Necrotic tissue(consider Fournier's gangrene)
- 2- palpation
- Penis : inspect the glans , open the urethral meatus
- Testicle: always start with the normal testicle ,Use both of your thumbs and index fingers to gently palpate the whole testicle.

Assess any scrotal mass for the following Site / size / shape/ consistency /tenderness / fluctuation/ transillumination/ cough impulse/ability to get Above the mass

- Epididymis :Palpate for tenderness on the posterior aspect of the testicle
- Spermatic cord assess for mass (spermatocele)and tenderness

3- Special tests

- cremasteric reflex : is a superficial reflex which is elicited when the inner part of the thigh is stroked. Stroking of the skin causes the cremaster muscle to contract and pull up the ipsilateral testicle toward the inguinal canal.

  Loss of the cremasteric reflex is associated with testicular torsion.

- Phren's test : (acute epididymitis vs. testicular torsion)

The test involves elevating the testes to assess the impact on the testicular pain. A reduction in testicular pain is associated with epididymitis

- 4- digital rectal examination

- prostate examination In males :palpate the prostate gland anteriorly and assess the size, symmetry and texture of the gland.
- A normal prostate is approximately walnut-sized with a palpable midline sulcus.
- It should be symmetrical and its consistency should be similar to that of the tip of the nose.
- Round rubbery and non tender
- In BPH : firm , enlarged
- In prostate CA : stony hard

• FINDINGS IN PHYSICAL EXAM AND THEIR CLINICAL RELEVANCE

- Inguinoscrotal hernia : unable to get above the swelling - does not transilluminate , associated with bowel sounds on auscultation - may be reducible and have a cough impulse
- Hydrocele : can’t get above the swelling - not reducible - transilluminates - no bowel sounds
- Epididymal cyst: firm - well circumscribed -separate from testicular body - transilluminates - able to go above the swelling
- Testicular tumor : able to go above the swelling - hard mass - no transillumination
- Varicocele : bag of worms - present on standing or valsalva maneuver usually resolves with lying flat
- Testicular torsion - retracted or high riding testicle - global swelling

Thank you