UTI

ee → ▽ renal scarring!
Renal insufficiency.

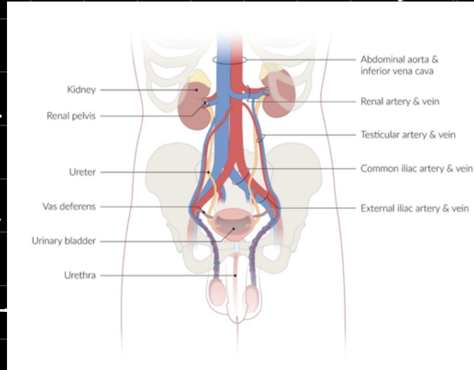
<1 year ♀ = ♂
>1 year ♀ >> → peak 2-4 ys.
Risk of recurrence ↑ 50-60%

* neonate ⇒ Non specific
 - FTT (recurrent febrile)
 - jaundice
 - poor feeding
 - irritability
 - weight loss

Pyelonephritis → ▼ scarring.

Flank/abd. pain → costovertebral tenderness.
Fever 5% of <2y > 38°
malaise N, V
Diarrhea.

* WBC cast.



Cystitis

urgency frequency hematuria
suprapubic pain
Fever

* mostly → ascending ↑
heme spread ↓ (neonate

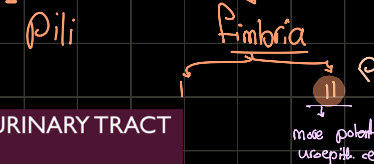
* - E. coli mc in female
 - klebsiella
 - proteus.

Male ⇒ E.coli = proteus → alkaline.

Viral → adeno virus ⇒ Hge cystitis.

* pseudomonas ⇒ Cong. anomaly.

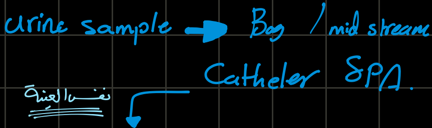
Pathogenicity



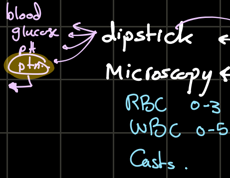
* only in certain E.coli [pyelonephritogenic]
* pyelonephritis.

RISK FACTORS FOR URINARY TRACT INFECTION

- Female
- Uncircumcised male *
- Vesicoureteral reflux *
- Toilet training
- Voiding dysfunction
- Obstructive uropathy
- Urethral instrumentation
- Wiping from back to front
- Bubble bath
- Tight clothing (underwear)
- Pinworm infestation
- Constipation *
- P fimbriated bacteria
- Anatomic abnormality (e.g., labial adhesion)
- Neuropathic bladder
- Sexual activity
- Pregnancy

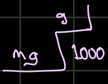


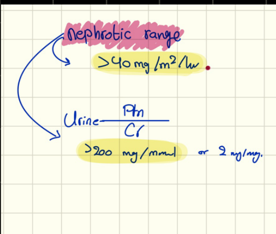
mg/L.	-ve	trace	normal
150			
300	+1		
1000	+2		
3000	+3		
20000	+4		



urinalysis
- nitrite
- Leukocyte esterase.

urine culture.
- 100k colonies
- 10k + symp.
- any gram -ve (SPA)





Proteus → alkaline

* normal urinalysis doesn't rule out UTI especially if symptomatic.

* asymptomatic bacteruria benign except in preg.

Enuresis

involuntary voiding of urine.

≥2 /week for 3 consecutive month.
>5 years old.

- 1ry ⇒ never been dry.
- 2ry ⇒ dry period >6 months.

- Nocturnal ♂
- Diurnal ♀

- monosymptomatic 80-85%
- polysymptomatic + urgency, frequency, urge incontinence, constipation, encopresis.

✓ Bed wetting alarm

~~oral & iv = same efficacy~~

Desmopressin (↓Na)

ab 7-14 days ← **acute pyelonephritis**

- oral
  - ↳ 3rd gen. cephalo
    - cefixime
    - ما بتغطي ال pseudomonas.
- IV
  - 3rd gen. ceph. (ceftriaxone)
  - Ampicillin
  - Aminoglycoside.

acute cystitis 3-5 days.

- TMS = co trimexazole.
- Nitrofurantoin
- Amoxicillin

IV / Hospitalization

- "toxic"
- unable to oral intake
- age < 3 months
- still symptomatic حتى ع ال oral ab.

U/S For every one! 1st 2days of Tx.
- ↳ hydronephrosis
- ? → anatomic abnormalities.

MCUG → ? VUR (not for every one.)
- atypical infection non E.coli.

DMSA → scarring

لازم الاعراض تخف خلال 48hr, اذا لا ← فكر بال Comp

↓

Scarring خطيرة ج → * recurrence, * VUR

VUR

1ry

anamoly of VU junction

Lower UT functioning normally

2ry

by ↓

- obstructed lower UT
- post. urethral valve.
- neurogenic bladder

5 stages

Grade	Findings
Grade I	• Reflux limited to the ureter • No ureteral dilation
Grade II	• Reflux up to the renal pelvis • No ureteral dilation
Grade III	• Reflux up to the renal pelvis • Mild dilation of the ureter • Blunting of the calyces
Grade IV	• Reflux up to the renal pelvis • Gross dilation of the ureter • Moderate ureteral tortuosity
Grade V	• Gross dilatation of the ureter, pelvis, and calyces • Significant ureteral tortuosity • Loss of papillary impressions