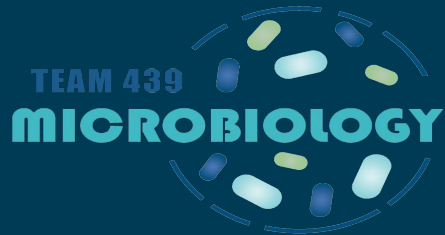


Renal Summary

Special thanks to all the members & leaders that helped to make micro team one of the best teams ,you are awesome all the best for you ❤️



Cystitis

<p>UTI Classification Remember: significant bacteriuria = 10^5 bacteria/ml</p>	<p>According to RF:</p> <ul style="list-style-type: none"> - Complicated M>F: (In women: short urethra, pregnancy, menopause). (In male: bacterial prostatitis). (Both: bladder stone, urethral stricture, catheterization, DM) - Uncomplicated F>M: non pregnant, healthy young sexually active female <p>According to anatomic site: -Lower: (cystitis) -upper: pyelonephritis</p>
<p>Pathogenesis</p>	<ul style="list-style-type: none"> - Ascending of perineal flora to urinary bladder (gain access by Sexual intercourse or Catheterization) - Haematogenous (rare)
<p>Etiology</p>	<ul style="list-style-type: none"> - E.coli (Gram -ve rod shape, lactose fermenting, indole+ve) - Staphylococcus saprophyticus (in young sexually active females) (Gram+ve Catalase +ve, coagulase -ve) - Group B streptococcus (in pregnant female) (Gram+ve Catalase -ve, β-hemolytic) - Enterococcus faecalis (+ve diplococci) - Klebsiella pneumoniae (Gram -ve rod shape, lactose fermenting, indole-ve)
<p>Clinical Presentation</p>	<ul style="list-style-type: none"> - Dysuria - Frequency - Urgency - Suprapubic tenderness - No fever
<p>Laboratory Diagnosis</p>	<ol style="list-style-type: none"> 1- Specimen: Mid-stream urine or Suprapubic aspiration in children 2- Microscopic examination: 10 or more WBCs /cu.mm 3- Chemical screening test: Urine dipstick (+ve nitrite and leukocytes esterase) 4- Urine culture: Quantitative culture
<p>Treatment</p>	<p>Duration:</p> <ul style="list-style-type: none"> - Uncomplicated: 3 days - Complicated or recurrent: 10 (7)-14 days <p>Common agents: Amoxicillin, Amoxicillin-Clavulanic acid</p>
<p>Other types</p>	<ul style="list-style-type: none"> - Traumatic cystitis (in women) - Interstitial cystitis (unknown cause) - Eosinophilic cystitis - Hemorrhagic cystitis

Pyelonephritis: It is Bacterial infection of the renal pelvis, tubules and interstitial tissue of one or both kidneys

Pathogenesis	-Ascending bacterial infection. -Hematogenous spread to kidney is rare
Etiology	-E.coli -Klebsiella pneumonia. -Proteus mirabilis. -Enterococci. -Staphylococcus aureus. -Pseudomonas aeruginosa. - Candida -Viruses -Brucella
Risk Factors	-Pregnancy. -Obstruction. -Catheterized Patients. -Diabetes. -Immunosuppression
Signs and symptoms	-Flank pain -Tenderness. -urgency. -frequency and dysuria. -Fever & Chill. -Azotemia
Complications	-Hypertension, septic shock, multi organs failure, death. -Localized/generalized atrophy -Renal or perinephric abscesses. -Renal gangrene. -Metastatic infection. -Emphysematous pyelonephritis. -Papillary necrosis
Laboratory Diagnosis	-Urinalysis and microscopy -quantitative urine culture - Ultrasound or CT scan. -Blood culture 15-30%. -BUN and Creatinine levels
Management	-Mild: treated on an outpatient basis with antibiotics for 7-14 days. - Severe: Hospitalization
Treatment Antibiotics according to results of urinalysis culture	-fluoroquinolone (ciprofloxacin), TMP-SMX , aminoglycoside (gentamicin) with or without ampicillin or third generation cephalosporins (ceftriaxone) -in severe cases with risk of resistant bacteria: Piperacillin/tazobactam or carbapenems
Prevention	-Antimicrobial prophylaxis. -TMP-SMX 3/week or nitrofurantoin daily. -Intravaginal estradiol. -Cranberry juice. -Removal the urinary catheter

Special thanks to microbiology team 438 # = contradiction		Management of UTI					
	Ampicillin	Amoxicillin	Cephalosporins		Fluoroquinolone (ciprofloxacin)	TMP-SMX	Nitrofurantoin
			Ceftriaxone	Cephalexin			
Cystitis							
Uncomplicated For 3 days		✓	✓	✓	✓	✓	✓
As Prophylactic				✓		✓	✓
Pyelonephritis							
Uncomplicated For 14 days		✓ With clavulanic acid	✓	✓	✓	✓	
Pregnant women	✓	✓	✓	✓	#		✓
Children			✓	✓	#	✓	