

# Urinary Tract infection

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## Case 2

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# Definition

Is a bacterial infection that affects any part of the urinary tract. When bacteria get into the bladder or kidney and multiply in the urine, they cause UTI. The most common type of UTI is cystitis (bladder infection). Another kind of UTI is Pyelonephritis (kidney infection), and is much more serious.

# Classification

Upper urinary tract infections	Lower urinary infections
*Pyelonephritis	*Cystitis *Urethritis (infection of the urethra)

# Problems and Hypothesis

Right Flank pain	Fever	Pain while passing Urine(dysuria)	Vomiting
<ul style="list-style-type: none"> <li>*Kidney stone, infection, abscess</li> <li>*Infection of spine</li> <li>*Spine fracture</li> <li>*Muscle spasm</li> <li>*Disk disease</li> <li>*Skin inflammation</li> </ul>	<ul style="list-style-type: none"> <li>*Urinary tract infection</li> <li>*Medicines</li> <li>*Cancer</li> <li>*Autoimmune disease</li> <li>*Heat exhaustion</li> </ul>	<ul style="list-style-type: none"> <li>*Urinary tract obstruction</li> <li>*Urethral stricture</li> <li>*Urinary tract infection</li> <li>**Malignancy “Bladder cancer, urethral cancer”</li> <li>*Vaginitis</li> </ul>	<ul style="list-style-type: none"> <li>*Urinary tract infection</li> <li>*Uremia (Accumulation of urea)</li> <li>*Food poisoning</li> <li>*Food allergy</li> <li>*Bowel obstruction</li> <li>*Pregnancy</li> </ul>

# Question to ask the patient

- Any history of infection?
- Any history of allergy?
- Any history of medication?
- Social history (e.g. marital status, pregnancy, ..etc)?
- Family history?
- Severity & course of pain?

# Causes

\*bacteria the( most common type are E.coli, also *Klebsiella, Pseudomonas, Enterobacter, Proteus* can cause UTI)

\*fungi and some parasites .

\*Sexual intercourse

\*waiting too long to urinate

# Sign and symptoms

Pyelonephritis	Cystitis
<ul style="list-style-type: none"><li>*Emesis:vomiting is common</li><li>*Back , flank or groin pain</li><li>*Abdominal pain or pressure</li><li>* Shaking chills and high spiking fever</li><li>* Night sweats.</li><li>*Extreme fatigue</li><li>* Frequency</li><li>* Nocturia</li><li>*Urethritis</li><li>*Dysuria</li><li>* Pyuria</li><li>*Hematuria</li><li>*Pyrexia</li><li>*Cloudy and foul-smelling urine</li><li>* Confusion and associated falls are common presentation to ER for elderly</li><li>* Some UTI are asymptomatic</li></ul>	<ul style="list-style-type: none"><li>* Frequency</li><li>* Nocturia</li><li>*Urethritis</li><li>*Dysuria</li><li>* Suprapubic pain</li><li>* Pyuria</li><li>*Hematuria</li><li>*Pyrexia</li><li>*Cloudy and foul-smelling urine</li><li>* Confusion and associated falls are common presentation to ER for elderly</li><li>* Some UTI are asymptomatic</li></ul>

# Tests and diagnosis

- \*Analyzing a urine sample.
- \*Growing urinary tract bacteria in a lab.(urine culture).
- \*Creating images of your urinary tract.(using ultrasound CT)or computerized tomography
- \*Intravenous urinary pyelogram uses X-rays.  
Using a scope to see inside your bladder.
- \*CBC .



# Treatment

- \*SMX/TMP ( co-trimoxazole)
- \*Nitrofurantoin
- \*Fluroquinolone(ciprofloxacin)
- \*Tetracycline (*Doxycycline*)
- \*3rd generation cephalosporins (*Ceftriaxone & Cefazidime*)
- \*Aminoglycosides (*Gentamicin*)
- \* *B-lactam*(*Ampicillin*)

# Complications

- \*Untreated urinary tract infections can lead to acute or chronic kidney infections (pyelonephritis), which could permanently damage your kidneys.
- \*Young children also have an increased risk of kidney infections.
- \*Pregnant women who have urinary tract infections may have an increased risk of delivering low birth weight or premature infants.

# Prevention

- \*Good hygiene for males and females.
- \*Drink plenty of liquids, especially water.
- \*Wipe from front to back.
- \*Avoid potentially irritating feminine products.
- \*Empty your bladder soon after intercourse.

# Risk Factor

- \*female.
- \*sexually active.
- \*Using certain types of birth control.
- \*Undergoing menopause.
- \*Having urinary tract abnormalities.
- \*Having blockages in the urinary tract.
- \*Having a suppressed immune system.
- \*Using a catheter to urinate.