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Urinary tract infections

Presented By;-

Mr. Samarpan Mishra (Assistant Professor)

Specialization:- Pharmaceutical Chemistry

URINARY TRACT INFECTIONS (UTIs)

URINARY SYSTEM

- *E. coli* (most common)
- Poor hygiene
- Urinary catheter
- Female anatomy

Causes & Risk Factors

- *E. coli* (most common)
- Poor hygiene
- Urinary catheter
- Female anatomy
- Sexual activity
- Pregnancy
- Diabetes

Symptoms

- Painful urination
- Frequent urination
- Urgency
- Cloudy, foul smelling urine
- Pelvic/suprapubic pain
- Fever, chills

Prevention

- Hydration
- Good hygiene
- Void after sex
- Avoid irritants

Locations

- **Cystitis (Bladder Infection)**

Infection

- *E. coli*:
- **Pyelonephritis (Kidney Infection)**

CongestiveHeart

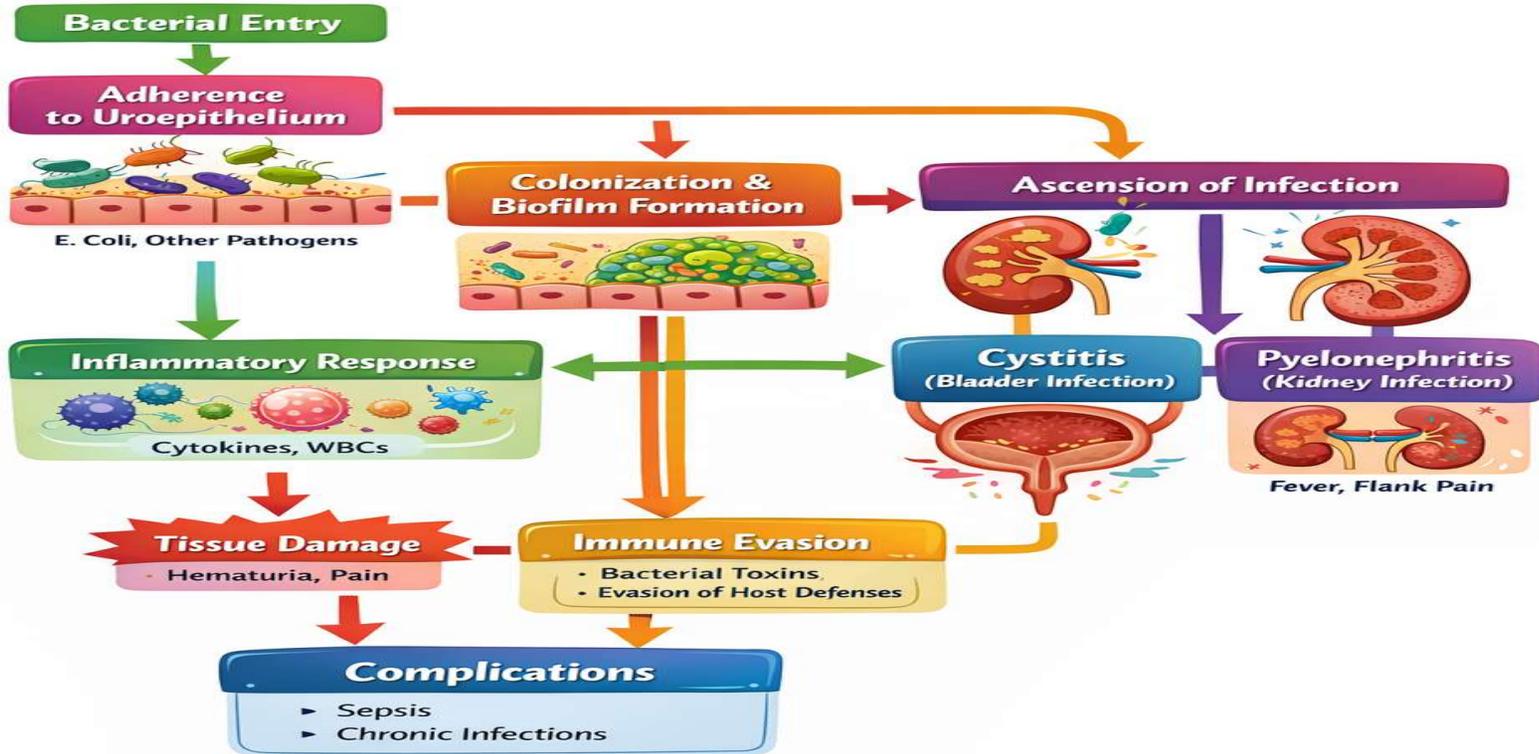
1. Introduction of Urinary Tract Infections

S.No	Heading	Details
1	Definition	Infection of any part of the urinary system including kidneys, ureters, bladder, or urethra.
2	Common Sites	Lower UTI (cystitis, urethritis); Upper UTI (pyelonephritis).
3	Most Affected Group	Females (short urethra), elderly, catheterized patients.
4	Causative Nature	Usually bacterial; occasionally fungal or viral.
5	Symptoms	Dysuria, frequency, urgency, cloudy urine, suprapubic pain; fever & flank pain in upper UTI.

2. Etiology of Urinary Tract Infections

S.No	Category	Causative Agents / Causes
1	Bacterial (Most common)	Escherichia coli ($\approx 80\%$), Klebsiella, Proteus, Enterococcus, Staphylococcus saprophyticus.
2	Fungal	Candida albicans (immunocompromised, catheter use).
3	Viral	Adenovirus (rare).
4	Risk Factors	Female anatomy, sexual activity, pregnancy, diabetes, urinary catheter, urinary obstruction.
5	Hospital-Acquired Causes	Indwelling catheters, instrumentation.

Pathophysiology of Urinary Tract Infections

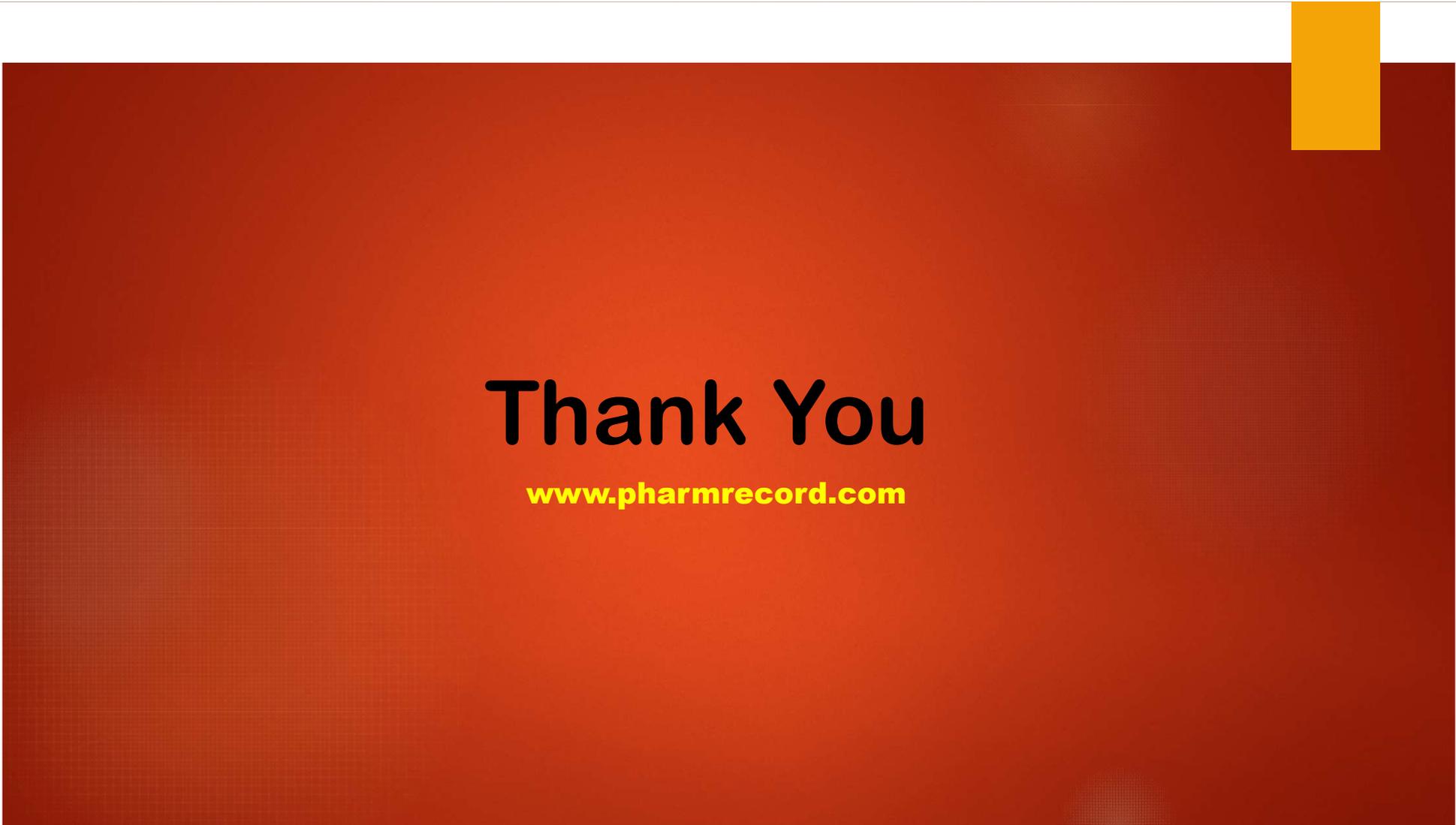


3. Diagnostic Tests for Urinary Tract Infections

S.No	Diagnostic Test	Purpose / Findings
1	Urine Routine Examination	Pyuria (↑ WBCs), bacteriuria, hematuria.
2	Urine Culture & Sensitivity	Gold standard; identifies organism & antibiotic choice.
3	Dipstick Test	Nitrite test, leukocyte esterase positivity.
4	CBC	Elevated WBC count in severe infection.
5	Ultrasound / CT Scan	Detect obstruction, stones, abscess (complicated UTI).
6	Blood Culture	In severe or upper UTIs (pyelonephritis).

4. Treatment of Urinary Tract Infections

S.No	Type / Severity	Treatment
1	Uncomplicated UTI	Nitrofurantoin, Trimethoprim-Sulfamethoxazole, Fosfomycin.
2	Complicated UTI	Fluoroquinolones (Ciprofloxacin), Amoxicillin-Clavulanate, Cephalosporins.
3	Severe / Hospitalized Cases	IV antibiotics: Ceftriaxone, Piperacillin-Tazobactam.
4	Fungal UTI	Fluconazole.
5	Supportive Therapy	Adequate hydration, analgesics, antipyretics.
6	Prevention	Hygiene, adequate fluids, voiding after intercourse, catheter care.



Thank You

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