

Burning issues – what the pharmacist's assistant needs to know about **cystitis**

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Introduction

Urinary tract infections (UTIs) are one of the most common types of bacterial infections. They can affect any part of the urinary system, but usually starts in the lower urinary tract (the urethra and the bladder). Women are 30 times more likely to be affected than men. This article will discuss infections of the lower urinary tract, managing mild symptoms and identifying symptoms that indicate the need for referral to a doctor.

The urinary tract and urinary tract infections

The urinary tract is the group of organs in the body that handle urine and include the:

- kidneys (two bean-shaped organs that filter the blood to make urine),
- bladder (a balloon-shaped organ that stores the urine),
- ureters (two tubes that transport the urine from the kidneys to the bladder), and
- urethra (a tube that carries the urine from the bladder to the outside of the body).

UTIs occur when bacteria that normally live in the gastrointestinal tract get into the urethra and travel up into the bladder. If the infection stays in the bladder, it is called a bladder infection or simple cystitis. If the infection travels up into the kidneys, it is called a kidney infection or pyelonephritis. Because the urethra is shorter in females, it is easier for bacteria to enter the bladder and women are therefore more likely to be affected by UTIs than men.

Cystitis

Risk factors

E. coli is the cause of bacterial cystitis in 70–90% of patients. Certain conditions may increase the risk of UTIs and they include:

- Pregnancy
- Menopause (decreased levels of oestrogen cause thinning of the lining of the urethra and makes it easier for bacteria to enter and cause infection)
- Diabetes
- Physical abnormalities such as an enlarged prostate, narrow urethra or anything that blocks the flow of urine
- Kidney stones
- Surgery involving the urinary tract
- Having a urinary catheter
- Bowel incontinence
- Problems causing incomplete emptying of the bladder
- Advanced age
- Conditions that affect personal care habits, such as Alzheimer's disease and delirium

Symptoms

The symptoms of cystitis may include:

- Strong urge to urinate often, even right after the bladder has been emptied
- Pain or burning when urinating
- Cloudy, dark, or bloody urine that may have a strong odour
- Pressure or cramping in the lower abdomen or back
- Low-grade fever in some patients

Children may experience additional symptoms such as irritability, lack of appetite, tiredness, weakness, nausea, and vomiting.

Managing symptoms

Mild cystitis may be treated with over-the-counter (OTC) medicines for a short period (< 2 days). The following measures have been recommended to manage symptoms:

Table I: Products available OTC to manage symptoms of cystitis

Product	Beneficial effects	Directions for use in adults	Precautions and warnings
Citro-Soda® Alkafizz®	Alkalinise the urine to reduce burning with urination	5–10 ml (4–8 g) dissolved in half a glass of water, 3–4 times daily	Contraindicated in renal failure, high blood pressure, heart disease and pregnancy
Pyridium®	Numbs the bladder and urethra to reduce burning pain	2 tablets three times a day	Do not take for longer than 2 days May change the colour of the urine to orange or red
Urispas®	Reduces urinary urgency and frequency	1 tablet (200 mg) three times a day	Take with food if stomach upset occurs

- Drink plenty of fluids (around half a glass every 30 minutes) and urinate as often as the need arises to flush out the bladder.
- Cranberries contain D-mannose that acts as a urinary antiseptic, and prevents bacteria from attaching to the lining of the urinary tract, making it easier to flush out bacteria. D-mannose can be taken either as cranberry juice or in powder or tablet form.
- Wiping from front to back after a bowel movement may reduce the introduction of bacteria into the urethra.
- Urination immediately after sexual intercourse to flush out most bacteria from the urethra.
- Avoid using perfumed soaps, bubble baths, bath oils, talc and vaginal deodorants as these can cause further irritation.

The following may help prevent or alleviate symptoms (Table I):

- Urinary alkalinisers are available OTC and can relieve the burning symptoms that patients experience when urinating, by making the urine more alkaline.
- Phenazopyridine (Pyridium®) numbs the bladder and urethra and can help reduce the burning pain associated with UTIs but should not be used for more than two days.
- Flavoxate relaxes the smooth muscle of the bladder and reduces bladder pain, the feeling of urgency as well as urinary frequency.
- Applying a hot water bottle or pad to the pelvic region and the back may help to relieve pain.
- Mild analgesics such as aspirin or paracetamol can ease the abdominal pain and discomfort associated with cystitis.

Pyelonephritis (kidney infection)

Infection that spreads to the kidneys can result in the following symptoms in addition to those seen in patients with cystitis:

- Chills and shaking or night sweats
- Fever
- Flushed, warm or reddened skin
- Pain in the side, back or groin

- Severe abdominal pain
- Fatigue and general ill feeling
- Nausea and vomiting
- Mental changes or confusion (often the only symptom in older patients)

All patients with symptoms of pyelonephritis or blood in the urine should be referred to a doctor. Cystitis is rare in men and can be an indication of a more serious condition. Thus, all male patients, children and pregnant women with cystitis should be referred to a doctor. Patients who do not respond to treatment within two days and those with recurrent cystitis should also be referred for further investigation.

Conclusion

Most cases of cystitis resolve spontaneously within a few days but can cause discomfort. Symptoms may be managed with OTC treatment, but if they do not improve within two days, patients should see a doctor for further assessment. The pharmacist's assistant can recommend some treatment options based on the patient's symptoms, but also need to be able to identify symptoms that require patient referral to a doctor.

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