



Woman's health

Cystitis

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- Women have unique health care needs from menstrual disorder to pregnancy. A small number of conditions can be treated by OTC drug, providing accurate diagnosis is made.

Cystitis

- It is an inflammation of the bladder. In half cases, bacterial infection is the problem. Infection occurs by patients' own bowel flora that ascend the urethra from the perineal areas. Bacteria then transferred to bladder, where they proliferated.
- The most common bacteria are: *Escherichia Coli*, *Staphylococcus saprophyticus*, *Proteus mirabilis* and *Enterococci*.

- The majority of patients presenting the pharmacy have acute uncomplicated cystitis, having the following clinical features:
- -Dysuria
- -Urinary Frequency
- -Urgency
- -Nocturia and Haematuria
- The first sign of attack is an itching or pricking sensation in the urethra. The patient feels that she needs to pass urine urgently but pass only a few burning, painful drops, worsening at the end of voiding urine. After urination, the bladder may not feel completely empty, even straining produces no further flow.
- This frequency of urine occurs through out the day and night. Symptoms usually start suddenly with low back pain and suprapubic discomfort. The urine may be cloudy and strong smelling; these may be signs of bacterial infection.

○ What you need to know:

- Age
- gender
- Symptom
- urethral irritation
- urinary urgency
- frequency
- dysuria
- haematuria
- vaginal discharge
- back pain
- fever, chills
- N&V
- low abdominal pain
- associated symptoms
- previous history and medication.

○ Significant questions and answers:

- Age: a child with symptoms of cystitis requires referral for further investigation and treatment. It could be UTI & in children it can damage bladder & kidney particularly after recurrent infections.
- Gender: cystitis more common in female than in male. Since the urethra is much shorter in females than in males, the passage of the bacteria is much easier. In addition, the process is facilitated by sexual intercourse.
- In male the prostatic fluid has antibacterial properties, providing an additional defense against bacterial infection. So man presents with symptoms of cystitis require medical referral (a possibility of serious condition such as a kidney and bladder stones or prostate problem).

○ Hematuria:

- presence of blood in the urine is an indication for referral to the doctor. Sometimes blood in the urine may indicate other problems such as a kidney stone, especially when associated with loin pain or between loin and groin. A blood in urine without any pain requires referral to exclude the possibility of tumor in bladder or kidney.
- But don't forget that hematuria also occur in cystitis when there is inflammation to the lining of bladder and urethra. This is not serious case can be solved by pharmacist and the patient responds quickly to antibiotic treatment.

○ Pregnancy:

require referral because bacteruria (bacteria > 100000/ml of urine) can lead to kidney infection and other problems.

○ Duration

- About half of cases will resolve within 3 days even without treatment. Treatment with OTC preparations is reasonable for mild cystitis of short duration (less than 2 days), or for use until the patient can consult her doctor.
- Vaginal discharge: require referral, it indicates local fungal (Chlamydial infection) or bacterial infection i.e. (vaginitis). Patient exhibit similar symptoms to cystitis (but cystitis without vaginal discharge).
- Associated symptoms: the pharmacist should be aware of the symptoms which accompany (minor lower UTI - urethra & bladder) , or (upper UTI - ureters & kidneys) i.e. pyelonephritis, a serious problem which require referral. In such cases a patient had signs of systemic infection such as fever, chills, flank pain, and possibly N&V, loin pain and tenderness. Whereas the pain in cystitis is suprapubic (lower abdomen) or lower back.

◉ Previous history:

women with recurrent cystitis require referral.

It has been estimated that one in ten cases of UTI is followed by relapse (the same bacterium being responsible) or reinfection (where a different organism may be involved).

◉ Diabetes:

recurrent cystitis can sometimes occur in diabetic patient. So any patient with a history of cystitis together with increasing thirst, weight loss and a higher frequency of passing urine than normal require referral.

◉ Honeymoon cystitis:

Sexual intercourse may precipitate such attack due to minor trauma and a resulting infection when bacteria push along the urethra.

○ Other precipitating factors

Another common cause of dysuria in younger women related to the irritant effects of toiletries (e.g. bubble baths & vaginal deodorants) & other chemicals (e.g. spermicides and disinfectants). Lack of personal hygiene is not thought to be responsible, except in extreme cases.

○ Postmenopausal women

Oestrogen deficiency in postmenopausal women leads to thinning of the lining of the vagina. The vagina & the urethra become vulnerable to trauma, irritation and attacks of cystitis can occur.

○ Medication : Cystitis can be caused by cytotoxic drugs such as *cyclophosphamide*. The incidence of cystitis is higher in women who are on the pill.

○ Failed medication (Treatment timescale): The identity of any preparations already taken to treat the symptoms is important. Also if symptoms have not subsided within 2 days of beginning the treatment, the patient should be referred.

○ Indicative points of referral:

1. Children
2. Men
3. Diabetic patient
4. Elderly woman
5. Duration longer than 7 days
6. Immunocompromised patient
7. Pregnancy
8. Vaginal discharge
9. Loin pain or tenderness
- 10- Haematuria
- 11- Recurrent cystitis
- 12- Fever, N & V, flank pain (pyelonephritis)
- 13- Failed medication

○ Management:

- For pain relief, offer paracetamol or ibuprofen for up to 2 days. A high temperature will also be reduced, bearing in mind that a level above 38.5°C is more characteristic of pyelonephritis.
- OTC treatment is limited to products that contain alkalinizing agents, namely Sodium Citrate, Sodium Bicarbonate and Potassium Citrate. All are used to return the urine PH to normal, thus relieving symptom of dysuria. These substances work by making the urine alkaline (the acidic urine made by bacterial infection is responsible for dysuria).
- potassium citrate should not recommended to patients taking potassium-sparing diuretics, aldosterone antagonists or angiotensin converting enzyme inhibitors.
- Sodium citrate should not be recommended for hypertensive patients, anyone with heart disease or pregnant women.
- Such agents are not anti bacterial, so if symptoms not improved within 2 days, the patient should referral for C&S or first tries a course of Trimethoprim or Azithromycin for 3 days before referral.

Complementary therapies

Cranberry juice has been recommended as a folk remedy for years as a preventive measure to reduce UTI (bacteriostatic effect).

Practical points

- (i) Drink large quantity of fluid in order to emptied the bladder more frequently i.e. to flush the infecting bacteria out of the bladder.
- (ii) During urination the bladder should be emptied completely by waiting for 20 s after passing urine and then straining to empty the final drops.
- (iii) After a bowel motion wiping toilet paper from front to back may minimize transfer of bacteria from the bowel into the vagina and urethra.