

Postmenopausal cystourethritis

The menopause is associated with a dramatic fall in the production of oestrogens, which causes a rise in vaginal pH from a reduction in lactobacilli. This makes the lower genitourinary tract more susceptible to infection with pathogenic organisms. Colonisation of the vaginal introitus with pathogenic bacteria is more common and heavier in women who are susceptible to [recurrent urinary tract infection \(UTI\)](#).^[1]

The epithelium of the bladder and urethra also undergo atrophic changes and this can lead to atrophic cystitis and the formation of a urethral caruncle. The lower part of the urethra is sensitive to oestrogens. In some cases the cause of symptoms is interstitial cystitis. Postmenopausal women are therefore at increased risk not only of recurrent UTIs but also of dyspareunia, vaginal irritation, pruritus, pain and also symptoms of urgency, frequency, dysuria and urinary incontinence.

Epidemiology

In women aged over 65 the prevalence of UTI is said to be as high as 26%.^[2]

Risk factors^[3]

- There is an increased risk of UTIs in postmenopausal women with sexual activity, previous history of UTI, treated diabetes and incontinence.
- Other risk factors associated with recurrent UTI in postmenopausal women are vesical prolapse, cystocele and post-voidal residue.
- Diabetes and cerebrovascular event (as well as other neurological conditions) can lead to incomplete emptying of the bladder with a predisposition to recurrent UTI.
- Poor mobility and being confined to bed also increase the risk.

Presentation

Symptoms may include:

- Dysuria.
- Dyspareunia.
- Pruritus vulvae (this does not necessarily imply vaginal thrush).
- Urinary urgency.
- Frequency of micturition.
- Urinary incontinence.

Examination

Abdominal examination always precedes vaginal examination, or very large abdominal masses may be missed. Many surgeries stock only disposable Cusco's specula but, if available, the instrument of choice is the Sims' speculum. Performing this examination with a Cusco's speculum is very much more difficult.

Use a Sims' speculum with the patient in the left lateral position (or right lateral if you are left-handed).

- Note any vaginal atrophy.
- With the Sims' speculum retracting the posterior vaginal wall, ask her to bear down. Note any cystocele or uterine descent.
- Ask her to cough - note whether there is slight leakage from her bladder.
- Ask her bear down again and gently slip the speculum down and out, noting any rectocele as it descends.

Differential diagnosis

- [Diabetes](#) predisposes to infections of the genital tract.
- [Fibroids](#) can cause pressure on the bladder if very large. Smaller ones tend to atrophy after the menopause, but those larger than 5 cm do not.

Investigations

- [Dipstick urine testing](#) may show glucose, suggesting possibly undiagnosed diabetes. Nitrites suggest urinary infection.
- Midstream urine should be sent for culture and sensitivity. With persistent symptoms, repeated urine tests may help to distinguish between recurrent infection and failure to eradicate infection.
- If symptoms do not subside then investigation may include cystoscopy with biopsy, urography and urodynamic studies. If there is haematuria that does not resolve rapidly on treating infection, then further investigation is required.

Management

- Treat UTI on the basis of laboratory results. Resistant infection will require longer courses of antibiotics.
- Hormone replacement therapy (HRT) will help to reverse the atrophic changes but any therapeutic role for oral oestrogens remains uncertain.^[3]
- Vaginal oestrogens have been shown in controlled trials to reduce the incidence of UTIs in postmenopausal women.^{[4] [5] [6]}
- If related to sexual intercourse, consider a prophylactic quinolone to be taken after intercourse, as well as a vaginal lubricant and voiding after intercourse.
- For interstitial cystitis, amitriptyline and pentosan polysulfate or intravesical instillations are used.^[7]
- There is very little evidence about either the efficacy or the safety of herbal remedies.

Prevention^[3]

- Regular drinking of cranberry juice (but not drinking a lactobacillus preparation) appears to reduce the risk of recurrent UTI.
- Both long-term antibiotics and antibiotics after sexual intercourse seem effective.

Further reading

- [Rowe TA, Juthani-Mehta M](#); Diagnosis and management of urinary tract infection in older adults. Infect Dis Clin North Am. 2014 Mar;28(1):75–89. doi: 10.1016/j.idc.2013.10.004. Epub 2013 Dec 8.
- [Mody L, Juthani-Mehta M](#); Urinary tract infections in older women: a clinical review. JAMA. 2014 Feb 26;311(8):844–54. doi: 10.1001/jama.2014.303.
- [Menopause: diagnosis and management](#); NICE Guideline (November 2015 – last updated December 2019)
- [Menopause](#); NICE CKS, September 2022 (UK access only)

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