Recurrent UTI Referral

Many thanks for referring this lady with recurrent urinary tract infections (UTI). Here is compiled evidence from NHS Lanarkshire, NICE, European Association of Urology (EAU) and The Scottish Intercollegiate Guidelines Network (SIGN) to standardise treatment for recurrent urinary tract infections including when to refer to secondary care. We would encourage you to work through the guidance below and refer back if no improvement.

A UTI is defined as an inflammatory response of the urothelium to bacterial invasion and recurrent UTIs are defined as:

- ≥2 confirmed UTIs in 6months, ≥3 UTI's in 1 year, 1 episode of UTI with acute pyelonephritis plus 1 or more episode of UTI with cystitis/lower UTI

Extensive routine investigations such as cystoscopy and imaging are not routinely recommended but may be performed in some circumstances such as when renal calculi or outflow obstruction is suspected (EAU 2017).

In the over 50 age group specifically, if patients remain symptomatic after 3 months of conservative/medical management as below, please refer for a flexible cystoscopy after arranging ultrasound imaging of the urinary tract including a post void scan. Please kindly treat patients at risk of sexually transmitted infections and optimise medical conditions e.g. diabetes which increases susceptibility to infections.

Scottish Referral Guidelines for Suspected Cancer (bladder and kidney) advise **urgent** referral when:

- Aged 45 and over with:
    - **unexplained** visible haematuria without urinary tract infection, or
    - visible haematuria that persists or recurs after successful treatment of urinary tract infection
- Age 50 and over with unexplained non-visible haematuria and either dysuria or a raised white cell count on a blood test
- Abdominal mass identified clinically or on imaging that is thought to arise from the urinary tract
- Routine referrals should be made for:
    - Asymptomatic persistent non-visible haematuria without obvious cause
    - Unexplained visible haematuria < 45 years of age
    - Patients over 40 who present with recurrent UTI associated with any haematuria

NICE recommends **initial** referral to secondary care for

- all men, children under 16 years old, recurrent pyelonephritis, pregnant women
- diabetics, immunocompromised patients
- evidence of a structurally or functionally abnormal urinary tract (i.e. neurological disease, suspected fistula, confirmed stone on CT KUB, high post void residual >200ml or other known abnormality of their renal tract).

If patients do not meet referral criteria above, management should initially involve conservative management in the community. NICE and EAU do not support the recommendation for cranberry products as a meta-analysis of 24 studies on cranberry supplementation revealed no significant reduction in the occurrence of symptomatic UTIs in women.

1) Conservative management/self-care: Maintain dilute urine with frequent voiding (3-4hours maximum), void after intercourse, limit soaps/shaving etc around vagina

2) Chemo-prevention: To prevent bacteria from attaching to the bladder wall thereby causing infection:

a. D-Mannose 2g daily: once any acute infections have been cleared, early research show D-mannose may be effective in preventing people from getting further UTIs after they have recovered from one.

b. Methenamine Hippurate (Hiprex) 1g twice daily for 6 months is an alternative. The efficacy of therapy should be monitored by repeated urine cultures. A Cochrane review of the literature was first published in 2002 and updated 2007 and showed Hiprex may be effective for preventing UTI in patients without renal tract abnormalities.

c. Topical oestrogen if evidence of atrophic vaginitis on examination – post-menopausal or post oophorectomy with oestrogen deficiency (Estriol 1 pessary daily for 2 weeks, 1 pessary twice weekly for 12 weeks and review) https://bnf.nice.org.uk/drug/estriol.html

2) Antibiotic use in recurrent UTIs can be used:

- To self-start/treat active infection – ideally send MSSU before commencing
- As a single post-coital prophylactic dose – if coitus is a recognised trigger.
- Prophylactic nocturnal antibiotics – a prolonged period of antibiotic treatment may allow bladder epithelial healing, reducing the risk of future UTIs when antibiotics are then stopped (versus risk of resistance). Rotate on 3 monthly basis, maximum course length 6 months, based on MSSU cultures

 If multi-resistant consider earlier referral to secondary care to prevent further resistance - ≥ 3 resistant antibiotics)

Patients may find the following 'Recurrent Cystitis patient information leaflet' helpful. (https://www.baus.org.uk/_userfiles/pages/files/Patients/Leaflets/Recurrent%20cystitis.pdf)

If you believe there is new information or information we have missed at vetting which would suggest this lady should be seen in the Urology department, please re-refer back and we will appoint accordingly.

Yours sincerely,

Urology Consultants, NHS Lanarkshire

Below you will find links to the resources used to compile this document for your own perusal

 NICE guideline on Urinary tract infection (lower): antimicrobial prescribing https://www.nice.org.uk/guidance/ng109

 NICE guideline on Antimicrobial stewardship: changing risk-related behaviours in the general populationhttps://www.nice.org.uk/guidance/ng63

 NICE guideline for Urinary tract infection (recurrent): antimicrobial prescribing https://www.nice.org.uk/guidance/ng112/evidence/evidence-review-pdf-6545656621

 EAU Guidelines: Urological Infections https://uroweb.org/guideline/urological-infections/

 SIGN guideline for Management of suspected bacterial urinary tract infection in adults https://www.sign.ac.uk/assets/sign88.pdf

 Scottish Referral Guidelines for Suspected Cancer http://www.cancerreferral.scot.nhs.uk/urological-cancers/?alttemplate=guideline