GUIDANCE ON MANAGEMENT OF RECURRENT URINARY TRACT INFECTION IN NON-PREGNANT WOMEN

1. INITIAL PRESENTATION OF RECURRENT UTI

The widely accepted definitions of ‘recurrent UTI’ in women are three or more episodes of UTI in 12 months or two or more episodes of lower UTI in 6 months. This does not include episodes of bacteriuria without UTI symptoms (asymptomatic bacteriuria).

The following simple measures to limit UTI should be attempted prior to commencement of antibiotic prophylaxis:

- Encourage better hydration (1.6L/day recommended) to ensure more frequent urination
- Encourage urge initiated voiding and postcoital voiding. Advise sexually active women that diaphragm and spermicide use are risk factors for cystitis and discuss alternative contraception
- Consider advising the patient to obtain and try cranberry products e.g. high strength cranberry extract capsules, in order to reduce recurrence (avoid if on warfarin)
- Consider offering a prescription for a ‘stand-by’ antibiotic to be taken at the first symptoms of UTI.
- For recurrent cystitis associated with sexual intercourse: offer trimethoprim 100mg to be taken within 2 hours of intercourse (off-label use)
- For post menopausal women with risk factors such as atrophic vaginitis consider prescribing intra-vaginal or oral oestrogens
- For post-menopausal women with no obvious risk factors, consider referral to urology for further investigations, particularly if recurrent UTI is a recent problem

If these simple measures fail to improve symptoms then follow the flow chart below:

- Check MSU to confirm diagnosis and establish sensitivities during acute UTI episode
- If continued problems consider renal tract ultrasound (to detect stones, cysts, tumours and other abnormalities) and post void bladder residual volume scan (to detect voiding dysfunction)
- If investigations normal and continued problems consider prescribing low dose prophylactic antibiotics as per local guidance for a 3-6 month period, then review ongoing need
- If new presentation in post menopausal women also consider referral for cystoscopy to determine if symptoms are due to an intravesical lesion e.g. stone or tumour

Counselling prior to initiation of prophylaxis

The patient should be counselled at an early stage that antibiotic prophylaxis is not usually a life-long treatment. Antibiotics are given in this way to allow a period of bladder healing which makes UTI much less likely. There is no evidence they have any additional benefit beyond 6-12 months treatment therefore the treatment should be discontinued ideally after 6 months.

This patient information leaflet on recurrent UTI may be helpful [http://patient.info/pdf/4437.pdf](http://patient.info/pdf/4437.pdf)
2. STOPPING A PROLONGED COURSE OF PROPHYLACTIC ANTIBIOTICS

Identifying patients for review

Patients should be reviewed after 3-6 months of prophylactic antibiotics with a view to stopping them and it may be helpful to document a review date in the medical notes and also on the prescription. For audit purposes and retrospective review 6 months is suggested as a suitable trigger for prolonged duration.

Discussing patient concerns

Patients may feel anxious about returning to suffering recurrent UTIs. However after a prolonged period of antibiotic treatment in most cases this has allowed the bladder wall to ‘heal’ making UTIs less likely. They should be given appropriate advice regarding continuation of simple measures to prevent UTI.

The risks of long term antibiotics in terms of vulvovaginal side effects, *Clostridium difficile* and increased likelihood of infection with resistant organisms are also important considerations for the doctor and patient and should be fully discussed.

Recurrence of UTI after stopping antibiotic prophylaxis

It is important to ensure the patient is complying as far as possible with the simple measures outlined previously.

If they have not already had a renal tract ultrasound and post void bladder residual volume scan now is a good time to consider doing this in consultation with local specialists.

In post-menopausal women consider the possibility of atrophic vaginitis as a risk factor for UTI and manage appropriately. If recurrent UTI is a relatively ‘new’ problem in a post menopausal woman consideration should also be given to referral for cystoscopy.

However, if appropriate investigations have already been done and shown no abnormality and there are no other concerning ‘red flag’ symptoms and cranberry extract has already been tried (or is inappropriate e.g. if the patient is on warfarin) then continuation of prophylaxis may be considered. The ongoing need for antibiotic prophylaxis should be reviewed again after 3 months.

Current evidence for non-antibiotic therapies

*Cranberry products* Research suggests that cranberries prevent bacteria (particularly *E.coli*) from adhering to epithelial cells that line the wall of the bladder. A recent Cochrane review found no substantial reduction of risk of repeated UTI in cranberry treatment in women compared with placebo or no treatment. However when a large outlying trial was removed (which used lower thresholds for defining UTI) the relative risk (RR) of recurrent UTI was 0.58 (CI 0.39-0.86) demonstrating that cranberry reduced the risk by 40% of recurrent UTI. Optimum doses and formulations have not been established.

*Probiotics* do not significantly reduce recurrent UTI compared with placebo or no treatment, although the data investigating this are generally of poor quality.

*Methenamine* may be effective for short term prophylaxis in patients without renal tract abnormalities. For longer term prophylaxis the evidence is poor.

*Immunooactive prophylaxis*: Uro-Vaxom® is more effective than placebo in female patients with recurrent uncomplicated UTI and has a good safety profile. It is unlicensed in the UK. There is insufficient evidence about other vaccines.

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This guidance is based on a Medicines Management initiative developed in NHS Tayside.
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References

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