Reason for the review

Urinary tract infection (UTI) is the second most common clinical indication for empirical antimicrobial treatment in primary and secondary care, and urine samples constitute the largest single category of specimens examined in most medical microbiology laboratories. The criteria for the diagnosis of UTI can vary greatly across the UK and there is considerable evidence of practice variation in the use of diagnostic tests, interpretation of signs or symptoms and initiation of antibiotic treatment. However, prudent antibiotic prescribing is regarded as a key component of the UK’s action plans for reducing antimicrobial resistance and there is a need to ensure that the use of antibiotics in the management of UTIs is grounded in the best available evidence.

SIGN Guideline 88 – Management of suspected bacterial urinary tract infections in adults, does not address the treatment of recurrent UTI and nor does it directly address antibiotic prophylaxis of UTIs in non-catheterised patients. Fortunately, a Cochrane Library review published in 2008 does offer some guidance on the appropriate use of antibiotics to prevent UTIs in non-pregnant women. This review concluded that non-pregnant women who had two or more UTIs in the past year had less chance of having a further UTI if given a 6 to 12 month treatment course of antibiotics. The beneficial effect was found to last as long as the active antibiotic intake period lasted, however, no studies were found that tested this treatment approach beyond 12 months. Additionally, and not surprisingly, antibiotic use was associated with an increased and frequent incidence of adverse events such as nausea, skin rash and candidal infections. Unfortunately, due to the poor quality of the studies, the authors were unable to draw any conclusions about the most appropriate antibiotic to use, the optimum duration of prophylaxis, or the optimum dosing schedule. They were however able to conclude that in women with UTI associated with sexual intercourse, post-coital antibiotic prophylaxis was as effective as daily intake (Nitrofurantoin, 50 – 100mg post-coital stat dose).

As a result of this Cochrane review and in light of previous well documented evidence that antibiotic exposure is associated with the development of antibiotic resistance, it seems prudent to review the use of antibiotics in non-pregnant women where they have been used for a period longer than 12 months to prevent the recurrence of UTI due to the lack of evidence beyond this timeframe and the likelihood of adverse events and antibacterial resistance occurring. UTIs are of course associated with pain, fever and potentially renal failure and any decision to interrupt treatment should be made on an individual patient basis after an assessment of the risks and benefits of the treatment. The definition of recurrence is controversial but that which is described in the 2008 Cochrane review of 2 or more episodes within 6 months, or 3 or more episodes within 12 months would seem to be reasonable. With regards alternatives to the use of antibiotics for the prophylaxis of UTI in non-pregnant women, SIGN Guideline 88 and NHS Dumfries and Galloway Primary Care Antibiotic Guidelines both suggest the use of cranberry products or methenamine hippurate. Additionally, where UTI recurrence is associated with sexual intercourse, the use of post-coital antibiotic prophylaxis may considered as an alternative to daily antibiotic intake.

Inclusion Criteria

- Non-pregnant women who have been taking any antibiotic to prevent the recurrence of UTI for a period longer than 12 months.

Exclusion Criteria

- Patients with a terminal illness
- Any other criteria specified by the Practice

Preparation and planning

- Protocol to be discussed with all GPs in the practice to ensure that agreement to proceed is reached
- Practice staff to be informed that review is taking place
- EMIS web search to be created to allow all women taking an antibiotic continuously for a period greater than 12 months to be identified
- Template patient letter to be created and agreed with practice
- Community pharmacies to be informed that the review is taking place
- GPs to be informed of alternative strategies for UTI prophylaxis recommended in SIGN 88 and in NHS D&G Primary Care Antibiotic Guidelines, i.e. cranberry products, methenamine hippurate and, where the occurrence of UTI is associated with sexual intercourse, post-coital antibiotic prophylaxis.
5 Action

- Computer search carried out to identify all women on the practice list who have been taking any antibiotic continuously for a period longer than 12 months
- A case note review for all patients identified in the computer search to be carried out to find those who are not pregnant and have been taking an antibiotic for longer than 12 months to prevent recurrence of a UTI
- A list produced of non-pregnant women who have been taking an antibiotic for UTI prophylaxis for a period greater than 12 months
- List to be given to relevant GP(s) with the recommendation that the ongoing need for the antibiotic should be reviewed in light of lack of evidence of benefit beyond 12 months, risks and benefits of the treatment and the likelihood of resistance to the antibiotic developing at some point
- Letter to be sent to those patients identified by the GP(s) as being suitable for having their antibiotic UTI prophylaxis stopped
- Where deemed appropriate by the GP or Prescribing Support Pharmacist, patients to be telephoned to discuss the discontinuation of antibiotic UTI prophylaxis
- In those instances where a patient does not manage their own medication e.g. Level C or Care Home resident, the relevant family member, carer or healthcare professional should be informed of the changed as appropriate

References

5. Olesen F, Østergaard I. Patients with urinary tract infection: proposed management strategies of general practitioners, microbiologists and urologists. Br J Gen Pract 1995;45(400):611-3

Review to be undertaken by: GP Authorisation: Date:
Appendix 1: Patient Letter

Dear Mrs _________

As a practice, we continuously review the medicines we prescribe for our patients to ensure that we are providing the most effective and safest care possible. One of the reviews we are currently carrying out is the prescribing of antibiotics on a long-term basis to prevent the recurrence of urinary tract infections. The evidence available to us tells us that this can be an effective way to prevent urinary tract infections in people who are prone to them however this has only been tested for a maximum period of 12 months and beyond that, we do not know how effective or safe it is.

In addition to this, we also know that antibiotics cause side-effects and that sooner or later, if you keep taking them, then the bacteria in your body will become resistant to them and they will stop working.

In view of this information, we feel that it is best to stop the regular prescription you receive for ______________ (insert drug name here). This recommendation has been made to prevent the bacteria in your body becoming resistant to ______________ (insert drug name here) and to prevent you experiencing the side-effects of the medicine. This change in your treatment will take effect immediately and you should stop taking any remaining ______________ (insert drug name here) you have at home and return it to a pharmacy to be disposed of.

It is entirely understandable that you may have questions regarding this and want to discuss those with someone and if that is the case, please do not hesitate to call us at the surgery or contact our Prescribing Support Pharmacist ______________ (insert name here) on ______________ (insert phone number here).

Should you experience any symptoms in the future which you think may be the result of a urinary tract infection, please do not hesitate to contact the surgery immediately to make an appointment to see one of our GPs.

Yours Sincerely

Prescribing Support Pharmacist