

HCAI/AMR Newsletter – December 2013

Recent updates on www.antibioticprescribing.ie:

1. Fosfomycin trometamol as the first line choice for uncomplicated UTI in women
2. Cefixime-resistant gonorrhoea has been diagnosed in Ireland
3. Chlamydia and PID update
4. Head lice

1. Fosfomycin trometamol as the first line choice for uncomplicated UTI in women.

Fosfomycin trometamol is now recommended as a single dose treatment option (3g stat dose sachet) for uncomplicated UTI in women. It works by interfering with cell wall synthesis in both gram-positive and gram-negative bacteria by inhibiting the initial step involving phosphoenolpyruvate synthetase. It is highly active against gram-negative pathogens such as E-coli and other enterobacteriaceae, and gram-positive pathogens such as enterococci and staphylococci, bacteria commonly implicated in UTI.

On review of the recent evidence, the Primary Care Antimicrobial Guideline Development Group has recommended fosfomycin as a first line option for the treatment of UTI in women because of the following advantages:

- Excellent activity against uropathogens such as E-coli and other enterobacteriaceae.
- Fosfomycin resistance in E- coli (the primary uropathogen) has remained low in many countries where the antibiotic has been in use for treatment of UTI for a number of years.
- The antibiotic reaches high concentrations in the urinary tract at the site of infection which is favourable for clinical cure and decreases the risk of selection of resistant bacteria.
- Single dose therapy is favourable for compliance.
- Spares empirical treatment with 3-5 day courses of beta-lactams such as amoxicillin and oral cephalosporins which may reduce the “selection pressure” for multi-resistant organisms such as ESBL E-coli and klebsiella species in the community.

Some important points to note however:

Fosfomycin has been introduced as a first line choice for treatment of uncomplicated UTI in women. For treatment of UTI in men or in complicated UTI,

fosfomycin is not currently recommended as first line for these indications but may be warranted in specific situations taken on the advice of an infection specialist.

Recommendation for use in pregnancy remains under review pending further evidence and safety data and recommendations from the IMB.

Fosfomycin should be avoided in the elderly and in patients with renal impairment due to diminished urinary excretion and potentially inadequate urinary concentrations.

To preserve the efficacy of this drug, its use should be limited where possible to the recommended indication in the antimicrobial guidelines, i.e. uncomplicated UTI in women, or in specific situations on advice of an infection specialist. For example, fosfomycin is not recommended for use for treatment of UTI in patients > 65 years in long term care facilities except in specific situations on the advice of an infection specialist.

2. Cefixime-resistant gonorrhoea has been diagnosed in Ireland. This is of concern for an infection that is increasing in incidence.

All suspected or confirmed cases of gonorrhoea should receive Ceftriaxone 500mg IM PLUS azithromycin 1gr po (single dose of each). This treatment is also suitable for pregnant or breastfeeding women.

It is important that all cases of gonorrhoea are diagnosed by culture and sensitivity, even if initial diagnosis is PCR (or other NAAT) based so that susceptibility testing can be performed and resistant strains identified. Close monitoring of resistance patterns is essential with this bacteria.

A test of cure should be obtained 1-2 weeks after completion of antibiotic therapy. If asymptomatic, test with PCR, where available, followed by culture if positive.

If the patient has persisting symptoms or signs, then do a test with culture, performed at least 72 hours after completion of therapy.

It is important that all patients with suspected and diagnosed gonorrhoea be referred to an STI clinic for contact tracing and for further STI testing (if not available within the patient's general practice). This is essential to curtail/prevent complications of the infection and curtail the spread.

Click [here](#) for further information/patient factsheets.

3. Chlamydia and PID update

Main drug interactions with antibiotics: this is listed under the useful information section of guidance. There are five main serious interactions. Prescribers should note that macrolides, fluoroquinolones and antifungals have the most potential for major interactions and should only be used where clinically indicated for specific infection or in the case of macrolides where there is true penicillin allergy.

This information is intended solely for use as a guideline and not as a complete reference source. We acknowledge that new evidence may emerge that may overtake some of these recommendations. The most up to date information is available from the Summary of Product Characteristics for each drug.

References: Summary of Product Characteristics, MHRA Drug Safety Updates, British National Formulary, Faculty of Sexual & Reproductive Healthcare Clinical Guidance: Drug interactions with hormonal contraception, Lexicomp Online™ Interaction Monographs, www.crediblemeds.org (composite list of QT drugs.).

Statins (Risk of rhabdomyolysis)	
Simvastatin	Contraindicated with the following anti-infective agents: itraconazole, ketoconazole, miconazole (oral gel) posaconazole, voriconazole, erythromycin, clarithromycin, telithromycin and nefazodone.
Atorvastatin	Consider short term suspension or close monitoring if itraconazole, ketoconazole, erythromycin or clarithromycin are taken for short periods. Itraconazole: do not exceed 40 mg atorvastatin daily. Clarithromycin: do not exceed 20 mg atorvastatin daily.
Rosuvastatin: erythromycin has been shown to reduce the levels of rosuvastatin. Caution should be taken when prescribing erythromycin/clarithromycin with Pravastatin due to potentially increased statin levels.	
Anticoagulants (Risk of bleeding)	
Penicillins and cephalosporins are preferred alternatives when patients are on anticoagulants. Documented reports of bleeding incidents are rare even though a theoretical risk exists. Monitor INR during treatment.	
	Warfarin
Metronidazole. Miconazole oral gel	Increased risk of bleeding with warfarin: use with caution, monitor INR closely. (Reports of bleeding incidents with metronidazole & increased half-life of warfarin by 60%. Clinically significant reports of bleeding episodes have occurred with concomitant use of miconazole oral gel.)

Ciprofloxacin, levofloxacin, moxifloxacin, clarithromycin, erythromycin, azithromycin, co-trimoxazole.	Increased risk of bleeding. Monitor INR closely during treatment. Reports of bleeding with these agents are documented.
	Dabigatran
Ketoconazole	Contraindicated: increased risk of bleeding.
Clarithromycin	Monitor: Increased risk of bleeding.
	Rivaroxaban, Apixaban
Ketoconazole, itraconazole	Contraindicated: increased risk of bleeding
Fluconazole, clarithromycin, erythromycin	Monitor for increased risk of bleeding.
QT interval prolongation	
Moxifloxacin	Contraindicated in patients taking drugs which prolong the QT interval.
Fluoroquinolones, macrolides & azole antifungals, miconazole oral gel.	Caution needs to be taken when prescribing them in cardiac disease and with other drugs that prolong the QT interval.
Drugs which prolong the QT interval: Imidazoles, Tricyclic antidepressants, atypical antipsychotics, amiodarone & other anti-arrhythmics, methadone, some other antidepressants (Citalopram, escitalopram, fluoxetine, mirtazapine, paroxetine, sertraline) alfuzosin, chlorpromazine & haloperidol, domperidone, galantamine, haloperidol, indapamide, lithium, methadone, quinine sulphate, tamoxifen, tizanidine, trazodone, co-trimoxazole, venlafaxine.	
Amiodarone	
Quinolones, co-trimoxazole	Avoid due to increased risk of arrhythmias & QT interval prolongation.
Macrolides	Caution due to increased risk of QT interval prolongation. (IV erythromycin contraindicated).
Combined Hormonal Contraception	
Recent guidance from the UK Faculty of Sexual & Reproductive Healthcare no longer advises that extra precautions are required when using combined hormonal contraception (CHC) with antibiotics. (unless those antibiotics are enzyme inducers e.g. rifampicin, rifabutin, isoniazid). The usual additional precautions regarding vomiting, diarrhoea and non-adherence apply. Correct contraceptive practice must be adhered to.	

4. Head lice

Treatment is recommended for persons with active infection, i.e. live lice.

You need to rotate the insecticide used.

Isopropyl myristate should be the first treatment choice considering the cure rate. Dimeticone 4% has a cure rate of 70% compared to 33% using malathion 0.5%. Permethrin (Lyclear Crème Rinse™) only 13 % cure rate in the UK.

Permethrin (Lyclear Dermal Creme is used for crab lice and scabies)

Treatment

Wet combing has shown cure rates of 57%, one session every four days for at least two weeks continued until there is no lice for three consecutive sessions.

OR Dimeticone 4% (Hedrin™), Study shows Hedrin, apply for 15 minutes to dry hair.

OR Isopropyl myristate (Full Marks Solution™), show cure rate of 82%

OR Permethrin (Lyclear Dermal Rinse), second treatment is required seven days after the initial treatment if live lice detected within the seven days.

No malathion preparation is currently available on the Irish market.

Useful websites

Antibiotic use in the community in Ireland – click [here](#) for details.

Public information campaign on antibiotics, including campaign materials – <http://www.hse.ie/go/antibiotics>

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