LOTHIAN PRESCRIBING BULLETIN

Supporting prescribing excellence - informing colleagues in primary and secondary care

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NHS Lothian

In this issue …

Reducing antibiotic use - no harm done

Evidence from the Netherlands confirms that reducing total antibiotic use in primary care results in lower antimicrobial resistance.[1] Antibiotic reduction is most appropriate in the management of self-limiting respiratory tract infections, where there is negligible benefit to patients and common adverse events. However, the challenge of antimicrobial stewardship is not just about reducing use, but also about identifying those patients who really need antibiotics.

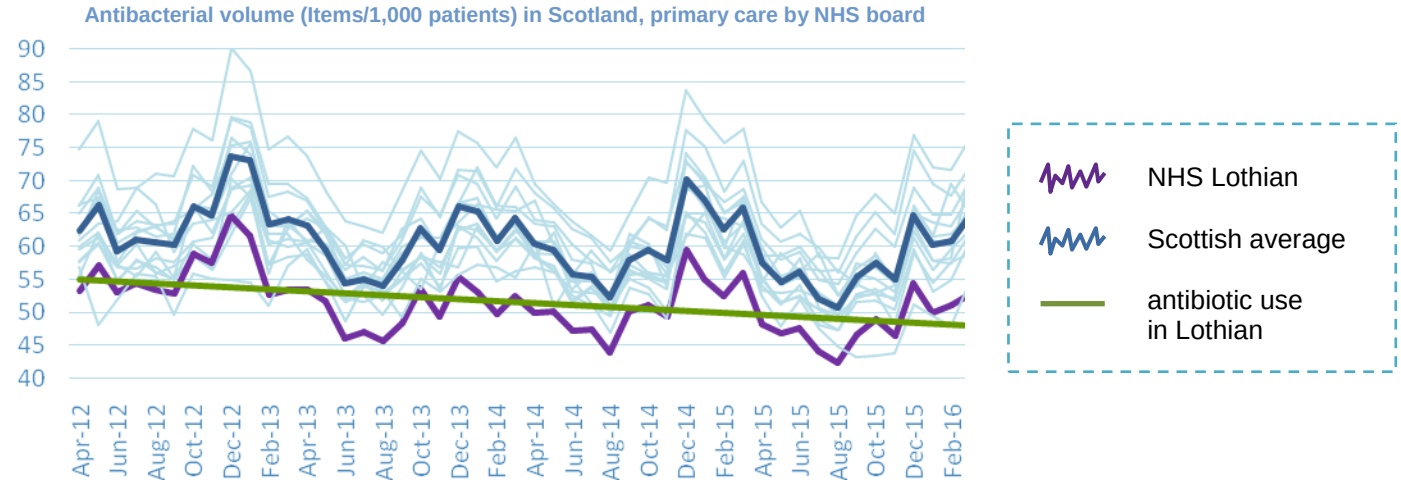
The BMJ recently published a cohort study to identify if reduced antibiotic use was associated with any adverse outcomes for patients.[2] Focussing on the management of self-limiting respiratory tract infections, the study used a large database (UK Clinical Practice Research Datalink) to identify 4.5 million UK patients (2005 to 2014) to see whether there was an increase in complications for those not treated with antibiotics. There was no increase in mastoiditis, empyema, bacterial meningitis, intracranial abscess or Lemierre's syndrome.

The authors of the study noted that if an average practice (7,000 list size) was to reduce antibiotics by 10 percent they would expect an additional case of community acquired pneumonia every year, and an additional case of peritonsillar abscess every 10 years.

DID YOU KNOW ?

GPs in NHS Lothian have reduced their prescribing of antibiotics by an impressive 13 percent over the last three years.

Closer to home, the NHS Scotland Infection Intelligence Platform (IIP) has been developed by Public Health and Intelligence (PHI), with Information Services Division and Health Protection Scotland. The IIP links all the national databases relating to the management of patients with infections. Analysis has demonstrated that reduction of antibiotic use in primary care is not associated with an increased risk of serious bacterial infection.[3] Further reduction is required on a global scale to maintain antimicrobial effectiveness.



References:

1. Sheldon, T. British Medical Journal 2016;354:i4192 www.bmj.com/content/354/bmj.i4192 *Accessed 18.08.16*
2. Gulliford MC *et al*. British Medical Journal 2016;354:i3410. www.bmj.com/content/354/bmj.i3410 *Accessed 18.08.16*
3. Measuring Potential Unintended Consequences of Interventions to Reduce Primary Care Antibiotic Use. Information Services Division. NHS National Services Scotland. www.isdscotland.org/Health-Topics/Health-and-Social-Community-Care/Infection-Intelligence-Platform/Communications/_docs/Study-7b-Poster.pdf *Accessed 18.08.16*

Ambulatory care plans for apixaban in DVT and PE

Apixaban is a direct oral anticoagulant (DOAC) and a selective direct factor Xa inhibitor. It has a relatively short half-life (~12 hours) in comparison to warfarin, and is therefore given twice daily. It is rapidly absorbed following oral administration, with patients being fully anticoagulated within 3 to 4 hours. Apixaban was recently added to the LJF as first choice for treatment of acute deep vein thrombosis (DVT) or acute pulmonary embolism (PE) and prevention of recurrent DVT and PE in adults. **Ambulatory care plans** have been developed for **DVT**, **suspected PE** and **confirmed PE** as well as **Apixaban Prescribing Guidance Prescriber Information** *[links to Intranet]* to support this change in practice. Within NHS Lothian, apixaban is also approved as second choice for the prophylaxis of stroke and prevention of systemic embolism in non-valvular atrial fibrillation, and for use in patients undergoing cardioversion and radiofrequency ablation requiring anticoagulant cover.

Dose recommendations for DVT and PE

The dose differs according to indication. Dosing in non-valvular atrial fibrillation (NVAF) was covered in LPB Issue 80, July 2016 so this article will focus on the dosing for DVT/PE.

Treatment	Prophylaxis of recurrent DVT/PE
Apixaban 10mg twice a day for 7 days then 5mg twice a day for minimum 3 months; maximum 6 months	Ongoing therapy after 6 months: apixaban 2.5mg twice a day
No dose reduction for age or weight. Apixaban is not recommended for use in NHS Lothian in patients with severe kidney impairment (eGFR <30 mL/min). Women of child-bearing age should be counselled at the time of initiation regarding the need for reliable contraception as the handling of apixaban in pregnancy is unclear. Apixaban must not be prescribed in patients who are pregnant or breastfeeding.	

Monitoring

Routine monitoring of coagulation is not required with apixaban. Neither the dose nor the dosing intervals should be altered in response to changes in laboratory coagulation parameters. For patients with normal kidney and liver function, it is recommended that urea, electrolytes and liver function tests should be checked at least annually or more frequently if evidence of mild or moderate kidney or liver impairment.

Patient education

The **Apixaban Prescribing Guidance Prescriber Information** includes a counselling checklist. Without the need for regular monitoring there are fewer occasions for healthcare professionals to provide patient education and reinforce the need for adherence. It is essential that patients understand why they need to take apixaban and the importance of adherence to the dosing regime in order to achieve effective anticoagulation. An 'Apixaban Education Record Sheet' has been developed to aid a standardised approach to the counselling session upon initiation for use along with a Patient Alert Card and Patient Information booklets.

Key messages

- **Apixaban has a relatively short half-life and therefore must be given twice a day.**
- **Doses of apixaban vary depending on indication.**
- **Doses in kidney impairment also depend on indication.**
- **Routine monitoring of coagulation is not required with apixaban.**
- **Patients on long-term apixaban should have an assessment of kidney function annually.**
- **Apixaban must not be prescribed in patients who are pregnant or breastfeeding.**
- **Patient education on initiation is vital to reinforce the need for compliance.**

Thanks to Mr Duncan Wilson, Specialist Clinical Pharmacist Cardiology and Dr Julia Anderson, Consultant Haematologist, for contributing this article.

LJF updates

Child formulary – central nervous system

Following a review of the drug treatment of depression and related sections a number of changes to section 4 of the child formulary were agreed. These include: updates to dosing information in line with the current BNFc and alterations to bring consistency to the paediatric sections in line with the adult LJF where appropriate. The prescribing notes for the drug treatment of depression and obsessive compulsive disorder have been expanded in line with NICE clinical guidelines.

The main points to emerge from the review were to reinforce the advice that specialist referral is recommended for diagnosis and initial treatment. Particularly in the initial management, specific arrangements should be made for patient monitoring. In those cases where treatment is initiated by a GP, specialist advice should be sought from a psychiatrist within the Child and Adolescent Mental Health Services team. Non-pharmacological treatment is highlighted as first line in the management of acute anxiety state and anxiety disorders.

Drug treatment of moderate to severe depression

- Sertraline has been added as a second choice medicine.
- Citalopram has been added as a prescribing note, for use where first and second choice medicines are unsuccessful or not tolerated due to side-effects.
- A new prescribing note has been added providing a link to patient information leaflets specifically for children.

Valproate for the management of epilepsy or for the treatment of mania

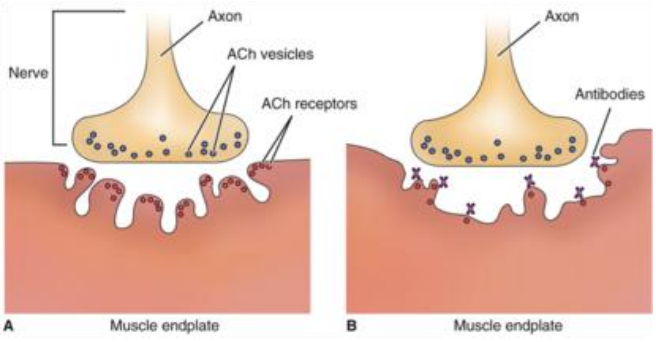
In line with the strengthened MHRA warning the prescribing notes have been amended to highlight that valproate should not be prescribed to female children, female adolescents, women of childbearing potential or pregnant women unless other treatments are ineffective or not tolerated. Links are included to the MHRA communication materials (Feb 2016) on valproate and the risk of abnormal pregnancy outcomes.

Thanks to Ms Diane Murray, Critical Care Pharmacist for contributing this article.
Thanks to the Royal College of Paediatrics and Child Health for permission to use the Medicines for Children logo.

Adult formulary - myasthenia gravis

Recent updates to the LJF for adults include the addition of a new prescribing note in 10.2.1 Drugs used in myasthenia gravis with a link to the Myaware website which provides useful information on medicines which may exacerbate myasthenia, for example some antibiotics. Where appropriate the relative risks should be discussed with the patient's neurologist.

The LJF first choice remains as pyridostigmine bromide and second choice as neostigmine.



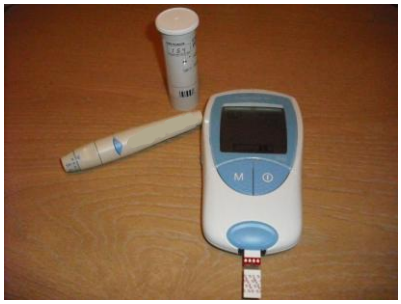
Safe use of Coaguchek® in point of care testing

Point of care testing (POCT) refers to the analysis of samples by non-laboratory staff at sites near to the patient. It can improve patient safety and care by providing immediate access to results of investigations, allowing prompt decision-making on patient management with appropriate initiation or adjustment of treatment.

A policy to support the use of Coaguchek® devices for INR measurement in patients receiving warfarin has been approved by the Area Drugs and Therapeutics Committee. It aims to ensure robust, high quality, safe and effective POCT using Coaguchek® systems (manufactured by Roche) in primary care.

The policy does not include the use of Coaguchek® for self management and self monitoring by patients on warfarin in primary care.

The policy sets out the responsibilities of those using Coaguchek® POCT testing and describes the good practice required to ensure that INR measurements by POCT devices in general practice are as good as those provided by hospital laboratories.



Recommendations are provided on staff training and qualifications, INR control, managing clinical events related to anticoagulant therapy, accurate record keeping, continuity of care, health and safety, and quality assurance. Computer assisted dosing is recommended and the patient should be provided with written instructions on their dose of warfarin.

The full document can be accessed here: http://intranet.lothian.scot.nhs.uk/NHSLothian/NHSLothian/BoardCommittees/AreaDrugTherapeutics/MedicinesGovernancePoliciesADTCPolicyStatements/Pages/default.aspx.

Thanks to Ms Maureen Reid, Primary Care Pharmacist, for contributing this article.

Serious interactions with miconazole and warfarin

A recent MHRA update reminded healthcare professionals of serious bleeding events in patients taking miconazole and warfarin.[1]

Miconazole, **including the topical gel formulation**, can enhance the anticoagulant effect of warfarin; if miconazole and warfarin are used concurrently, the anticoagulant effect should be carefully monitored and, if necessary, the dose of warfarin reduced.

Patients should be advised to tell their doctor or pharmacist if they are receiving warfarin before using products that contain miconazole, including those available without prescription, and to seek medical advice if they notice signs of over-anticoagulation during treatment, such as sudden unexplained bruising, nosebleeds or blood in the urine.

Reference:

1. Drug Safety Update. Volume 9, Issue 11, June 2016. Medicines and Healthcare products Regulatory Agency. www.gov.uk/government/uploads/system/uploads/attachment_data/file/529618/DSU_pdf_June_2016.pdf *Accessed 18.08.16*

Supplements:

Recent SMC and Lothian Formulary Committee Recommendations
The supplements can be accessed via the LJF website www.ljf.scot.nhs.uk in 'Prescribing Bulletins'.

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