NHS Lothian

LOTHIAN PRESCRIBING BULLETIN

Supporting prescribing excellence - informing colleagues in primary and secondary care

Issue 101 January 2020

*Cr*eatinine - *Cl*ear the confusion

Estimated glomerular filtration rate (eGFR) and creatinine clearance (CrCl) are two estimates of renal function available to prescribers. eGFR is reported in the blood results. It is an acceptable estimate of renal function for most drugs and most situations. However, eGFR may over or under estimate renal function in some groups of patients and situations. This can result in patients receiving incorrect doses of their medicine in relation to their renal function.

For example, the MHRA drug Safety Update October 2019, highlighted a yellow card report of a suspected adverse drug reaction where the initial dosing of a direct-acting oral anti-coagulant (DOAC), based on the eGFR values, resulted in a significant bleed. Retrospective review of the renal function using CrCl identified that the dose was too high for the patient.

The use of CrCl, which is calculated using Cockcroft and Gault formula, is the recommended method for estimating renal function when calculating drug doses. This includes:

- DOACs
- nephrotoxic drugs, such as vancomycin and amphotericin B
- patients aged 75 years and older
- patients at extremes of muscle mass (BMI <18kg/m^2 or >40 kg/m^2)
- medicines that are largely renally excreted and have a narrow therapeutic index, such as digoxin and sotalol.

Existing guidance from the BNF already advises prescribers to use calculated CrCl rather than eGFR in these patient groups.

Consult the relevant BNF monograph and/or Summary of Product Characteristics for drugs requiring dosage adjustment based on CrCl. Renal function and drug dosing should be reassessed in situations where eGFR and/or CrCl change rapidly, such as in patients with acute kidney injury.

Applications such as MDCalc, provide the ability to use adjusted body weight, ideal body weight or actual body weight as appropriate when calculating the Cockcroft and Gault CrCl value. Tools are also embedded in clinical systems such as Vision (VISION+ named as GFR) and EMIS, for calculating CrCl which can be utilised by Primary Care Practitioners.

Bronchiectasis

The Respiratory Managed Clinical Network has updated the existing NHS Lothian guideline for diagnosis and treatment of adult bronchiectasis. This is based on the new British Thoracic Society Guidelines published in January 2019. It is a recommendation of good practice and therefore endorsed for use in both primary and secondary care.

This and other updated documents can be found on the Respiratory MCN intranet page under the Guidance Documents section here.

There is also a useful website to direct patients to, for managing and living with their bronchiectasis, available at:

https://www.bronchiectasis.scot.nhs.uk/

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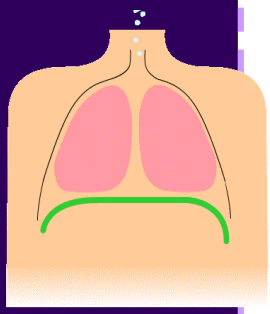
To switch or not to switch... that is the question



A recent study looked at the effect of switching to equivalent inhalers and its effect on health outcomes.[1] Switching medicines from brand to generic or to equivalent medicines for financial reasons is often unpopular with the medical and patient population. However, medicine switches are often encouraged through local policy to reduce the financial pressure on the NHS.

This study used a self-controlled case series to estimate incidence ratios to compare health outcomes between 2000 and 2016.[1] The four health outcomes specifically assessed were exacerbations, GP consultations, non-specific respiratory events and adverse medication events. Using the Clinical Practice Research Database a cohort of 570,000 asthma and 170,000 COPD regular inhaler users were identified, 2% and 6% respectively had been switched.

This study found that generally speaking, the inhaler switches were associated with reduced exacerbations. The rate of consultations, respiratory events and adverse medication events did not change significantly. It was noted that inhaler adherence significantly increased post-switch and around 95% of patients remained on their new inhaler.

Another reason for switching inhalers was to reduce the environmental impact of metered dose inhalers (MDI). MDIs use the gas hydrofluoroalkane as a propellant which is estimated to contribute 4% of the NHS's entire carbon footprint. Switching from a MDI to a dry powder inhaler (DPI) is thought to reduce the carbon footprint by a factor of 18. DPI inhalers are prescribed less than MDIs yet according to this study, switching between these devices did not seemingly impact on exacerbations, adverse medication events or respiratory events.

A *separate study* found that switching one MDI device to a DPI device could save 150-400kg CO_2e (carbon dioxide equivalent) annually, thought to be equivalent to installing wall insulation at home, recycling or cutting out meat.[2] The study concluded that switching to an equivalent inhaler in patients with asthma or COPD appeared safe and did not negatively affect the patient's health.

NICE has released a *new patient decision aid* to help patients choose the inhaler that is best for them, and best for the environment.

NHS Lothian does not yet have guidance regarding this.

References:

1. https://thorax.bmj.com/content/thoraxjnl/74/11/1078.full.pdf

2. https://bmjopen.bmj.com/content/9/10/e028763

Montelukast (Singulair®) - A reminder of the risk of neuropsychiatric reactions

The recent MHRA Drug Safety Update is a reminder to prescribers to be alert for possible neuropsychiatric reactions in patients taking montelukast and consider carefully the benefits and risks of continuing treatment if they occur.

- *Most frequently reported suspected neuropsychiatric side effects have been nightmares/night terrors, depression, insomnia, aggression, anxiety and changes in behaviour and are seen across all age groups.*
- *Advise patients and their caregivers to read carefully the list of reactions in the patient information leaflet and seek medical advice if they occur.*
- *Remember to report suspected adverse drug reactions to the Yellow Card Scheme.*
- *More information on these events have been added to the Summary of Product Characteristics and Patient Information Leaflet.*

Prostate cancer medication from the community pharmacy

A new community pharmacy service was launched in NHS Lothian on 1 July 2019. The service will enable the dispensing of two prostate cancer medications, namely enzalutamide and abiraterone via the patient's regular community pharmacy rather than the hospital pharmacy. Patients will still attend the Edinburgh Cancer Centre or St John's Hospital for review and receive their prescriptions from their hospital team for dispensing at their preferred local community pharmacy.

General practitioners will **not** be required to take over the prescribing of these medications.

However continued assistance with taking blood samples for these patients, and supporting them with their prostate cancer related symptoms will continue as before.

As of the second week in November, 85 Lothian and 10 Borders patients are receiving their medication via this new service. It has been well received by patients and pharmacies.

Should patients present to the practice requesting supply or with other queries related to their cancer medication, please contact:

SACToutpatients@nhslothian.scot.nhs.uk

It would be good practice to include in the Key Information Summary (KIS) that a patient has been prescribed one of these drugs and add an alert to the patient's records. They could also be added as an 'out of practice medication' following Scottish Clinical Information Management in Practice (SCIMP) guidelines.

Information on the community pharmacy tiered services can be found here.

"patients will .... receive their prescriptions from their hospital team for dispensing at their preferred local community pharmacy."

Medication to be taken with lark or owl?

Recent media attention has highlighted a paper in the European Heart Journal which looked at the timing of antihypertensive medication.

The Hygia Chronotherapy Trial 2019 investigated whether the timing of anti-hypertensive medication had a beneficial effect on cardiovascular (CV) risk. This was undertaken in 40 primary care centres in Northern Spain and data was reviewed by the Research and Co-ordinating Centre of the University of Vigo.

The patients were caucasian (10,614 men and 8,470 women). Ambulatory BP measurement was undertaken for 48 hours at the start of the study and at least annually for a median of 6.3 years of follow up. Individuals were required to adhere to a routine of daytime activity and night-time sleep. Patients were randomised to take medication either at night or the morning.

Results showed a significantly enhanced reduction in asleep blood pressure and increase in blood pressure dipping during the night. The therapeutic effect on awake BP was not compromised. There was a markedly diminished occurrence of major CVD events. Numerous studies have shown that the asleep mean BP is a sensitive prognostic marker of cardiovascular disease. At the conclusion of the study, the number of anti-hypertensives prescribed to those taking their medication at night was significantly lower than for patients who took their medication in the morning. Also, patients taking their medication at night had a more favourable lipid profile and improved renal function.

A major limitation of the Hygia Chronotherapy Trial is that the patients were from only one ethnic group. Also, the physicians were allowed to prescribe without restriction from a list of five recommended classes, which resulted in an unbalanced number of patients per medication class. The University of Dundee should be reporting on the TIME study at the start of 2020. This is another large randomised long term follow up CV study investigating this question, and should provide more information.

Ref: R C Hermida et al. Bedtime hypertension treatment improves cardiovascular risk reduction: the Hygia Chronotherapy Trial European Heart Journal, https://doi.org/10.1093/eurheartj/ehz754 Published: 22 October 2019.

LJF Update… LJF Update… LJF Update…

A summary of LJF amendments can be found on the LJF website, and look at the section to see all the current information.

Dry eyes (section 11.8.1)

The choices have changed substantially and are mirrored across the adult, children's and minor ailments formularies. Choices are now broken down into mild, moderate or severe dry eye.

Eye drops can in the main be prescribed generically. The prescribing notes include information on the most cost effective brand.

In order to minimise confusion, due to the number of different sodium hyaluronate products available, they should be prescribed by brand name. Products of the same strength may not be equivalent.

Chapter 6 Endocrine system

The whole of the endocrine chapter (excluding diabetes) has been reviewed and amended by the respective working groups.

- Prescribing notes have been amended throughout the chapter, providing additional information on hypothyroidism in pregnancy, liothyronine and carbimazole use in pregnancy.
- A new section has been included for Cushing's syndrome. This is for specialist use in secondary care only.
- The HRT section has undergone a thorough review. Prescribing notes have been rewritten to take into account changes in management of the menopause and associated risks. Formulary choices of HRT products have changed, some of the changes reflect long term supply issues.
- Oestrogen patches are a particular supply problem. There is no reason why they cannot be prescribed generically. This will allow the community pharmacist flexibility around supply problems. The patient will need to be informed that whilst they have a preferred brand, this and the dosing frequency, may change according to availability.

Melatonin (Paediatric section 4.1.1)

Due to changes in product availability it has been increasingly difficult to prescribe and dispense unlicensed versions of melatonin. Whilst the formulary choice remains Circadin®, there has remained a significant proportion of Bio-Melatonin® prescribed.

A short life working group has reviewed the formulary section and have agreed that Circadin® remains the formulary choice. There are no clinical reasons for patients to remain on Bio-Melatonin®. Patients can be switched to Circadin®, without needing to be referred back to CAMHS or Community Child Health. Information regarding this has been circulated to prescribers. Prescribing notes have been amended to signpost to sleep hygiene related information and websites.

Drug driving regulations – update

In issue 99 of the LPB we highlighted the introduction of new drug driving offences which would be coming into force on 21 October 2019. As a reminder, this is new legislation and will operate in an addition to the existing offence of driving while impaired through alcohol or drugs. We noted that the Scottish Government were developing guidance for healthcare professionals.

This is now available via this link.