Milton Keynes Clinical Commissioning Group

PRESCRIBING NEWS

November 2012

Link Health Fair
The Pharmacy Team attended the Link Health Fair in Middleton Hall in October. During the day they promoted the correct use of inhalers, undertook some medication reviews and spoke to people about reducing waste by sensible ordering of repeat prescriptions. There was a lot of interest in the displays and many people took the opportunity to "Ask a Pharmacist" for advice.

CCG Prescribing Group Meeting, 7th November 2012
A range of topics were discussed, including:-

- Change to the PIS sartan target – now 66% to include losartan, candesartan and valsartan (caps only).
- Shared care protocols for Tenofovir and Entecavir were agreed
- Reports received from each neighbourhood pharmacist and care home pharmacist
- Thanks to Dr Sarah Whiteman for chairing the group for the past year. Volunteers sought to take over the Chair role.

Medicines and Therapeutics Committee, 20th November 2012

- An application for Octasa was not approved.
- An application for Ursodeoxycholic acid 250mg/5ml was approved for addition to the formulary. It is used for cholestasis, cholestasis in association with total parenteral nutrition and to improve hepatic metabolism of fatty acids and bile flow in children with cystic fibrosis.

Health and Care Event
Middleton Hall – 23rd October

Reminder

Prescriptions for appliances
Please be aware that when you send off prescriptions to appliance contractors, the right hand side of the prescription listing all the patient's other medicines should not be sent.

Please also make sure that you have the patient's consent to send prescriptions to designated pharmacies and appliance contractors.

Pneumovax and General Practice

Milton Keynes has experienced a statistically significantly higher rate of unplanned hospital admissions and mortality due to pneumonia (as compared to the national average) for a number of years and pneumonia is currently the fifth most common cause of death locally. Immunisation offers GPs the opportunity to reduce the risk of this disease in those over 65 years of age or in a clinical risk group. **Where patients do not fit into a clinical risk group it is recommended that a single pneumococcal vaccination is offered at 65 years of age in order to provide protection at the earliest possible opportunity.** Re-vaccination is not required in the general population; however antibody levels are likely to decline rapidly in individuals with no spleen, splenic dysfunction or chronic renal disease and therefore re-immunisation with 23-valent PPV is recommended every five years in these groups.

Pneumococcal Vaccination in Milton Keynes
The aggregated pneumococcal vaccination up-take rate for those aged 65 and over in Milton Keynes appears high when compared to the England average (83% and 70.5% respectively); however up-take varies dramatically between GP practices, ranging from only 50% of the eligible population being vaccinated to 93.8%
A recent review undertaken locally identified practices with statistically significantly lower vaccination rates and those practices will be supported to increase up-take of the PPV vaccination. **All** practices are asked to:-

- Increase proportion of patients receiving PPV at 65 years of age
- Create a system to alert GPs to patients who require regular re-vaccination due to underlying conditions
- Improve discharge co-ordination to ensure those admitted with pneumonia are vaccinated either in hospital or at the first opportunity upon discharge

The survey was undertaken by Dr Lucy Douglas-Pannett, Public Health Specialty Registrar

Which medicines need dose adjustment when a patient stops smoking?

Prepared by UK Medicines Information (UKMi) pharmacists for NHS healthcare professionals
Date prepared: August 2012

Summary

- The majority of interactions between medicines and smoking are not clinically significant.
- Healthcare professionals giving smoking cessation advice should be aware of a small number of medicines, and in particular theophylline, clozapine and olanzapine, which may require dose adjustment or increased monitoring when smoking is stopped.

Cigarette smoking can interact with some medicines. This is mainly due to polycyclic aromatic hydrocarbons in cigarette smoke that stimulate cytochrome P450 enzymes, particularly CYP1A2. A number of medicines that are metabolised via CYP1A2, for example theophylline, may consequently be more rapidly metabolised in smokers. There have also been reports of pharmacodynamic interactions with some medicines.

The majority of interactions are not clinically significant but the potential for interaction should be borne in mind if a patient starts or stops smoking. The table below lists those interactions considered to be of most clinical importance, describes the nature of the interaction and advises on appropriate management when a patient taking an interacting drug stops smoking. Since the majority of interactions are due to components of cigarette smoke other than nicotine, these interactions are not expected to occur with nicotine replacement therapy (NRT). The information in the table applies to patients who stop smoking regardless of whether they use NRT or not.

Drug name	Nature of interaction	Clinical relevance	Action to take when stopping smoking
Warfarin	Warfarin is partly metabolised via CYP1A2. An interaction with smoking is not clinically relevant in most patients. The dose of warfarin is adjusted according to a patient's INR	Moderate	If a patient taking warfarin stops smoking, their INR might increase so monitor the INR more closely. Advise patients to tell the physician managing their anticoagulant control that they are stopping smoking.
Theophylline	Theophylline is metabolised principally via CYP1A2. Smokers need higher doses of theophylline than non-smokers due to theophylline's shortened half-life and increased elimination. Some reports suggest smokers may need twice the dose of non-smokers.	High	Monitor plasma theophylline concentrations and adjust the dose of theophylline accordingly. The dose of theophylline may need to be reduced by about one quarter to one third one week after withdrawal. However, it may take several weeks for enzyme induction to dissipate. Monitor theophylline concentration periodically. Advise the patient to seek help if they develop signs of theophylline toxicity such as palpitations or nausea.
Chlorpromazine	Chlorpromazine is metabolised principally via CYP1A2. Smokers have lower serum levels of chlorpromazine compared with non-smokers.	Moderate	Be alert for increased adverse effects of chlorpromazine (e.g. dizziness, sedation, extra-pyramidal symptoms). If adverse effects occur, reduce the dose as necessary.
Clozapine Olanzapine	Clozapine and olanzapine are metabolised principally via CYP1A2 and clearance is increased in smokers. Serum levels are reduced in smokers compared with non-smokers; smokers may need higher doses.	High	Monitor serum drug levels before stopping smoking and one or two weeks after stopping smoking. Be alert for increased adverse effects of clozapine. If adverse effects occur, reduce the dose as necessary.

Drug name	Nature of interaction	Clinical relevance	Action to take when stopping smoking
Methadone	Methadone is metabolised via isoenzymes including CYP1A2. There has been a case report of respiratory insufficiency and altered mental status when a patient taking methadone for analgesia stopped smoking.	Moderate	Be alert for signs of opioid toxicity and reduce the methadone dose accordingly.
Insulin	Smoking is associated with poor glycaemic control in patients with diabetes. Smokers may require higher doses of insulin but the mechanism of any interaction is unclear.	Moderate	If a patient with insulin-dependent diabetes stops smoking, their dose of insulin may need to be reduced. Advise the patient to be alert for signs of hypoglycaemia and to test their blood glucose more frequently.

The following criteria have been considered in grading the clinical relevance of interactions:

High: Documented interaction with clinically important effects in a number of patients and/or
Drugs metabolised principally by CYP1A2 and with a narrow therapeutic range.
Moderate: Documented pharmacokinetic interaction with no or minor clinical effects, or isolated reports of clinically important effects and/or
Drugs metabolised partly by CYP1A2 and with a narrow therapeutic range and/or
Drugs metabolised principally by CYP1A2 and with a wide therapeutic range.
Low: Theoretical interaction without documented cases and/or
Drugs metabolised partly by CYP1A2 and with a wide therapeutic range.

This table does not consider interactions with pharmacological agents used for smoking cessation (e.g. bupropion, varenicline), or indirect interactions caused by the effects of smoking on, for example, blood pressure and lipid levels.

High dose vitamin D in pregnancy

High dose vitamin D in pregnancy
We have received some enquiries about the safety of high dose vitamin D in pregnancy. This is a summary of the answer that we received from the Medicines Information Service. The full response is available on request from your neighbourhood pharmacist or the pharmacy office.

Vitamin D encompasses a large family of fat soluble steroid preprohormones. Humans require vitamin D2 (ergocalciferol), present in some dietary foods such as fungi, and vitamin D3 (colecalciferol), which is synthesised in the skin through 7-dehydrocholesterol irradiation by UV light, specifically in the UVB range (280-315nm), and present in oily fish/ cod liver oil.

Poor vitamin D status in pregnancy may be associated with an increased risk of small for gestational age infants and pre-eclampsia, however, available data are conflicting. Insufficient evidence exists as to whether poor maternal vitamin D status during pregnancy affects the health of offspring in later childhood. Potential longer term associations with increased risk of multiple sclerosis, type-1 and type-2 diabetes, various cancers, cardiovascular disease, psychiatric conditions, infantile rickets and osteoporosis in offspring of mothers with low vitamin D status have also been suggested in the literature.

Vitamin D supplements of 10mcg/day vitamin D (or equivalent) are currently recommended for all pregnant and breastfeeding women. There is no evidence from epidemiological studies that use of vitamin D at the above dose, or any of its analogues in pregnancy, is associated with an increased risk of congenital malformation, however data are limited.

There are insufficient data available in the literature to comment on the safety of high dose vitamin D administration during pregnancy. Hypercalcaemic vitamin D toxicity is associated with ingestion of very high doses of vitamin D (serum 25-OHD levels in excess of 350nmol/l). There are therefore concerns that maternal hypervitaminosis D could result in maternal, foetal and/or neonatal hypercalcaemia. Should supplementation with high doses of vitamin D be considered clinically necessary in pregnancy, regular monitoring of maternal calcium concentration may be indicated.

Prescribing Information on Dabigatran

As patients start to receive dabigatran it is important for prescribers to be aware of the cautions, contra-indications and interactions associated with its use.

Cautions for use

Elderly; body-weight less than 50 kg; bacterial endocarditis; bleeding disorders; thrombocytopenia; recent biopsy or major trauma; oesophagitis, gastritis, gastro-oesophageal reflux; concomitant use of drugs that increase risk of bleeding; **assess renal function before treatment in all patients and at least annually in elderly and patients with renal impairment.**

Contra-indications

Active bleeding; severe renal impairment (CrCL < 30 ml/min); severe liver disease; significant risk of major bleeding; prosthetic heart valve

Interactions

Amiodarone	plasma concentration of dabigatran etexilate increased by amiodarone (reduce dose of dabigatran etexilate).
Anticoagulants	increased risk of haemorrhage when dabigatran etexilate given with other anticoagulants (avoid concomitant use except when switching with other anticoagulants or using heparin to maintain catheter patency)
Antidepressants, SSRI	possible increased risk of bleeding when dabigatran etexilate given with SSRIs
Antidepressants, SSRI (related)	possible increased risk of bleeding when dabigatran etexilate given with SSRI-related antidepressants
Carbamazepine	plasma concentration of dabigatran etexilate possibly reduced by carbamazepine —manufacturer of dabigatran etexilate advises avoid concomitant use
Ciclosporin	plasma concentration of dabigatran etexilate possibly increased by ciclosporin —manufacturer of dabigatran etexilate advises avoid concomitant use
Dronedarone	plasma concentration of dabigatran etexilate increased by dronedarone —avoid concomitant use
Itraconazole	plasma concentration of dabigatran etexilate possibly increased by itraconazole —manufacturer of dabigatran etexilate advises avoid concomitant use
Ketoconazole	plasma concentration of dabigatran etexilate increased by ketoconazole —avoid concomitant use
NSAIDs	possible increased risk of bleeding when dabigatran etexilate given with oral NSAIDs
Phenytoin	plasma concentration of dabigatran etexilate possibly reduced by phenytoin —manufacturer of dabigatran etexilate advises avoid concomitant use
Rifampicin	plasma concentration of dabigatran etexilate reduced by rifampicin —manufacturer of dabigatran etexilate advises avoid concomitant use
St John's Wort	plasma concentration of dabigatran etexilate possibly reduced by St John's wort —manufacturer of dabigatran etexilate advises avoid concomitant use
Tacrolimus	plasma concentration of dabigatran etexilate possibly increased by oral tacrolimus — manufacturer of dabigatran etexilate advises avoid concomitant use
Verapamil	plasma concentration of dabigatran etexilate possibly increased by verapamil (reduce dose of dabigatran etexilate)

Poor inhaler technique highlighted by the DTB

Despite inhalers accounting for 4 of the top 10 drugs with the highest total expenditure (£900 million in 2011) studies indicate that most patients cannot use them correctly. Patients with poor technique only receive a fraction of the intended dose which might mean their dose has to be escalated; patients on higher doses and poor technique are much more likely to suffer from side-effects. NICE recommends that inhaler technique is checked frequently, especially if considering increasing a patient's dose, as "most patients whatever their age are able to acquire and maintain adequate inhaler technique given adequate instruction".
DTB Vol 50, October 2012.

Pharmaceutical Advisers can be contacted on 01908 278713 / 278744