INHALED STEROID FORMULARY SECTION REVIEW

In October 2005, a multidisciplinary panel from primary and secondary care reviewed the inhaled corticosteroid section of the *Glasgow Formulary*. There have been no changes made to the medicines listed in the current *Formulary* edition. However, there have been changes relating to prescribing guidance and restrictions:

• Differences in dosing between beclometasone, budesonide and fluticasone have been highlighted. Fluticasone provides equal clinical activity to beclometasone and budesonide at half the dosage.

• The potential need for alterations in dosing with different CFC-free beclometasone devices has been stressed. The BNF or Summary of Product Characteristics should be consulted when prescribing.

• Community pharmacists should issue steroid cards to patients receiving high dose steroids (for adults ≥800micrograms of beclometasone or equivalent daily; see table below).

• Patients should be maintained at the lowest possible dose of inhaled steroid. Dose reductions of 25-50% should be considered every three months.

• Ciclesonide and mometasone remain non-*Formulary* as the panel felt there were no benefits over existing *Formulary* choices.

• Inhalers containing combinations of steroids and long-acting beta agonists are restricted for use in patients on step 3 or above of the BTS/SIGN asthma treatment guideline or for patients with COPD in accordance with the Glasgow COPD Guidelines.

• Children should not generally receive more than the recommended doses of inhaled corticosteroid; however, if higher doses are required they should be initiated by a respiratory paediatrician.[1]

Examples of high dose steroids

Drug	Definition of high dose
Beclometasone (except Qvar)	**≥ 800 micrograms**
100mcg	≥ 8 puffs daily
200mcg or 250mcg	≥ 4 puffs daily
Beclometasone CFC-free (Qvar®)	**≥ 400 micrograms**
50mcg	≥ 8 puffs daily
100mcg	≥ 4 puffs daily
Budesonide or budesonide/formoterol	**≥ 800 micrograms**
200mcg or 200mcg/6mcg	≥ 4 puffs daily
400mcg or 400mcg/12mcg	≥ 2 puffs daily
Fluticasone or fluticasone/salmeterol	**≥ 400 micrograms**
125mcg or 125mcg/25mcg*	≥ 4 puffs daily
250mcg or 250mcg/25mcg* or 250mcg/50mcg	≥ 2 puffs daily
500mcg or 500mcg/50mcg	≥ 1 puff daily

* The therapeutic dose of salmeterol is 50mcg for patients above 4 years of age; Flixotide Evohaler® should be prescribed at 2 puffs per dose.

For the latest edition of the *Formulary* and the COPD guidelines, visit **www.glasgowformulary.scot.nhs.uk** For SIGN/BTS asthma guidelines see **www.sign.ac.uk**

PostScRxipt
from the
GGNHSB Area Drug & Therapeutics Committee
Issue 32 March 2006

In this issue . . .

Website
http://www.glasgowformulary.scot.nhs.uk

Drugs of choice

As highlighted in the Autumn 2004 special edition of *PostScript*, a recent development to the *Formulary* has been the designation of several drugs of choice (DoC) or formulations of choice. These are drugs from high volume areas of prescribing where there are several alternatives on the *Formulary* and, until recently, there was no way of highlighting which was the most appropriate first line choice. Information on all drugs and formulations of choice can be found in the *Glasgow Formulary* or on the ADTC website (www.glasgowformulary.scot.nhs.uk/). Schemes have been designed and implemented in primary and secondary care to increase the use of these drugs. Reports are provided to the ADTC and PMG at every meeting. This is the first of a regular series of updates which will be printed in *PostScript.*

Isosorbide mononitrate (ISMN)

The prescribing of standard release isosorbide mononitrate in preference to modified release (MR) has been highlighted by Audit Scotland as an area where considerable cost savings could be made without affecting patient care. Glasgow is one of the few areas in Scotland that has attempted to change prescribing from MR to the standard formulation. The switch has been possible due to agreement being reached in both primary and secondary care that this was safe and appropriate. To ensure the continued success of this programme, new patients should be routinely given the standard formulation. MR preparations should be reserved for patients with proven difficulties in taking asymmetric twice-daily ISMN, such as elderly patients with cognitive impairment in whom all other medicines are once-daily.

Prescribing in July - September 2005

• **Primary care:** 71% of ISMN prescribed as the standard formulation, an increase of 10% on the previous year. Overall costs have reduced by 23% from last year; the equivalent

contd on page 4

Incremental alphabetical list of published SMC advice on which Glasgow decisions have recently been taken.
For further information and a full list of SMC advice, visit **www.scottishmedicines.org**

Drug	Reason for consideration	Indication/pharmacology	SMC decision	Glasgow decision
Bevacizumab (Avastin®)	New medicine	First-line treatment of patients with metastatic carcinoma of the colon or rectum in combination with intravenous fluorouracil/folinic acid or intravenous fluorouracil/folinic acid/irinotecan.	Not recommended for use within NHS Scotland.	Non-*Formulary.*
Buprenorphine weekly patch (BuTrans®)	New formulation	Treatment of severe opioid responsive pain conditions which are not adequately responding to non-opioid analgesics.	Not recommended for use within NHS Scotland.	Non-*Formulary.*
Clarithromycin (Clarosip®)	New formulation	Treatment of acute and chronic infections caused by clarithromycin susceptible organisms.	Not recommended for use within NHS Scotland.	Non-*Formulary.*
Emtricitabine (Emtriva®)	New medicine (resubmission)	Treatment of HIV-1 infected adults in combination with other antiretroviral agents.	Accepted for restricted use within NHS Scotland.	*Formulary.* Restricted to use by HIV Specialists.
Emtricitabine / tenofovir disoproxil (Truvada®)	New medicine	Treatment of HIV-1 infected adults in combination with other antiretroviral agents.	Accepted for use within NHS Scotland.	*Formulary.* Restricted to use by HIV Specialists.
Estradiol / drospirenone (Angeliq®)	New medicine	Prevention of osteoporosis in postmenopausal women at high risk of future fractures who are intolerant of, or have contra-indications to, other medicinal products approved for the prevention of osteoporosis.	Not recommended for use within NHS Scotland.	Non-*Formulary.*
Estradiol / drospirenone (Angeliq®)	New medicine	Hormone replacement therapy for oestrogen deficiency symptoms in postmenopausal women more than 1 year post-menopause.	Not recommended for use within NHS Scotland.	Non-*Formulary.*
Formoterol metered dose inhaler (Atimos Modulite®)	New formulation	Treatment of persistent, moderate to severe asthma in patients requiring regular bronchodilator therapy in combination with long-term anti-inflammatory therapy.	Accepted for use within NHS Scotland.	*Formulary.* Acknowledge new formulation.
Ibandronic acid (ibandronate), (Bonviva®)	New formulation	Treatment of osteoporosis in postmenopausal women in order to reduce the risk of vertebral fractures. Efficacy on femoral neck fractures has not been established.	Accepted for use within NHS Scotland.	Non-*Formulary* following consultation with Osteoporosis Prescribing Subgroup.
Ibuprofen intravenous injection (Pedea®)	New formulation	Treatment of severe patent ductus arteriosus in pre-term newborn infants of less than 34 weeks gestational age.	Accepted for use within NHS Scotland.	*Formulary.*
Lansoprazole (Zoton FasTab®)	New indication	In combination with appropriate antibiotics, for the eradication of Helicobacter pylori from the upper gastrointestinal tract in patients with ulcer-like dyspepsia in whom Helicobacter pylori infection has been demonstrated.	Accepted for use within NHS Scotland.	Non-*Formulary.*
Metformin (Glucophage SR®)	New formulation (resubmission)	Treatment of type-2 diabetes mellitus in adults.	Not recommended for use within NHS Scotland.	Non-*Formulary.*
Nicotinic acid (Niaspan®)	New formulation (resubmission)	Treatment of dyslipidaemia.	Not recommended for use within NHS Scotland.	Non-*Formulary.*
Olopatadine eye drops (Opatanol®)	New medicine (resubmission)	Treatment of ocular signs and symptoms of seasonal allergic conjunctivitis.	Accepted for use within NHS Scotland.	*Formulary.*
Rabeprazole (Pariet®)	New indication	Treatment of Zollinger-Ellison syndrome.	Accepted for use within NHS Scotland.	Non-*Formulary.*
Tramadol / paracetamol (Tramacet®)	New medicine	Symptomatic treatment of moderate to severe pain.	Not recommended for use within NHS Scotland.	Non-*Formulary.*
Tipranavir, (Aptivus®)	New medicine	Treatment of HIV-1 infection in highly pre-treated adult patients with virus resistant to multiple protease inhibitors. Co-administered with low dose ritonavir.	Not recommended for use within NHS Scotland.	Non-*Formulary.*
Vinorelbine (Navelbine®)	New formulation	As a single agent or in combination for the first line treatment of stage III or IV non-small-cell lung cancer.	Accepted for restricted use within NHS Scotland.	*Formulary.* Restricted to use by specialist oncologists, in line with RCAG protocol
Alendronic acid 70mg Tablets	ADTC *Formulary* section review	Osteoporosis		*Formulary.* New Drug of Choice.
Calcichew D_3 Forte	ADTC *Formulary* section review	Osteoporosis		*Formulary.* Additional Formulation of Choice

For all article references, check our website http://www.glasgowformulary.scot.nhs.uk

Osteopororis review

A multidisciplinary prescribing sub-group of the Glasgow Osteoporosis Group was convened to review this section of the *Glasgow Formulary.* The agreed changes include:

1. Generic **alendronic acid once weekly** to be designated **bisphosphonate of choice** for osteoporosis.
2. Treatment options for osteoporosis, Paget's disease and hypercalcaemia to be differentiated to clarify what bisphosphonate may be used for specific indications.
3. Didronel PMO (etidronate) and calcitonin to be removed from the *Formulary.*
4. The need for referral to DADS before initiating a bisphosphonate is to be reinforced. The *Formulary* notes:
"Prescribers should consult the Glasgow Direct Access Densitometry Service referral criteria before initiating a bisphosphonate for osteoporosis, the preferred choice being alendronic acid 70mg once a week."
5. An algorithm will be produced to aid prescribing of drugs for osteoporosis in primary care and will be included in an appendix of the next edition of the *Formulary.*

Strontium ranelate (Protelos®)

Strontium ranelate has been added to the *Glasgow Formulary* for the treatment of postmenopausal osteoporosis restricted to women ≥75 years with previous fracture and T-score <-2.4 (or other women at equivalent high risk) when bisphosphonates are contra-indicated or not tolerated. This follows the SMC accepting it for restricted use within NHS Scotland.

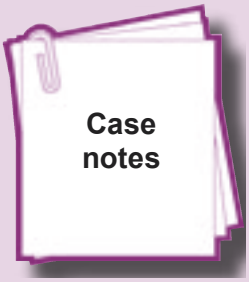
Strontium stimulates bone formation and reduces bone resorption. Two phase III randomised controlled trials, Spinal Osteoporosis Therapeutic Intervention (SOTI) and Treatment of Peripheral Osteoporosis (TROPOS), compared strontium ranelate 2g daily with placebo. SOTI recruited postmenopausal women aged ≥50 years with osteoporosis and a history of vertebral fractures. After three years, there was a significant difference in the incidence of new vertebral fractures. These occurred in 21% of patients in the strontium ranelate group and 33% in the placebo group ($p<0.001$). The number needed to treat (NNT) to prevent one new vertebral fracture over three years was nine.

TROPOS recruited patients with femoral osteoporosis >74 years or 70 - 74 years with one additional risk factor. Over three years, strontium ranelate was associated with a 1.7% absolute risk reduction in new non-vertebral fractures compared with placebo ($p=0.04$) and a 2.1% absolute risk reduction in hip fractures in high risk patients (>74 years with a femoral neck T-score <-3). Subgroup analysis indicated that strontium ranelate produced a relative reduction in vertebral fractures of 39% ($p<0.001$) compared with placebo. The NNT over three years was 59 to prevent one new non-vertebral fracture and 13 to prevent one new vertebral fracture.

Adverse effects were generally mild and transient. Nausea and diarrhoea were most common. There was a small increased risk of venous thromboembolism (VTE); this appears lower than the risk with HRT or raloxifene. Strontium ranelate is taken once daily, usually at bed-time. Absorption is reduced by food, milk and products containing calcium so dosing should be at least two hours after eating.

contd on page 4

The importance of clear communication



A 70-year-old male patient, whose medical history included diagnoses of ischaemic heart disease, hypertension and mild left ventricular systolic dysfunction, attended a pharmacist-run medication review clinic at his GP practice.

Despite not having any contra-indications, the patient was not receiving an ACE inhibitor. The pharmacist discussed this with the patient and GP and it was agreed to start ramipril at 2.5mg daily increasing to 10mg daily while undertaking monitoring, including blood pressure and kidney function.

After around five weeks, the patient presented with a generalised rash which had occurred since starting the ramipril. The GP advised stopping ramipril therapy and prescribed an antihistamine. Two weeks later, the pharmacist phoned the patient to discuss the rash. It had not improved since stopping therapy, and so ramipril was restarted at 5mg daily.

Ten days later, the patient presented to the GP having decided to stop taking the ramipril despite no definitive link being established between the drug and the rash. The GP prescribed a different antihistamine and performed a variety of blood tests, all of which were normal.

After a further two weeks, the pharmacist telephoned the patient to discuss alternative treatment. The possible intolerance to ramipril was documented and a prescription for losartan was issued. Despite specific instructions not to recommence treatment, the patient made a special request for a ramipril prescription two weeks after starting losartan. The GP registrar issued a prescription.

The pharmacist learned of this request the next day and telephoned the patient to discuss further. The patient had not wholly understood that ramipril was being replaced with losartan. The pharmacist also discussed the case with the GP registrar who had not checked the patient's computer record before signing the requested script. This would have highlighted the change in medication.

Learning points

• Practitioners need to spend time explaining medication to patients and checking their understanding of decisions taken. This is part of reaching concordance with patients about treatment decisions. The concept of concordance will be covered in a future edition of *PostScript*.

• Ideally, discussions with patients should be carried out face-to-face, as it can be difficult to gauge comprehension during telephone calls.

• Prescribers should check records before issuing scripts to ensure that the medication is still appropriate. In this case, the patient could have taken ramipril and losartan concurrently although this was neither intended nor indicated.

Formulary News *contd from page 3*

Bottom line:

• Strontium ranelate has been added to the *Glasgow Formulary* restricted to women ≥75 years with previous fracture and T-score <-2.4 (or other women at equivalent high risk) when bisphosphonates are contra-indicated or not tolerated.

• It should be used with caution in patients at increased risk of VTE.

• Incorporation of strontium ranelate into the skeleton results in greater apparent increases in BMD as measured by DXA because it has higher atomic mass than calcium. This does not confer greater efficacy in reducing fracture risk. The implications for monitoring strontium-treated patients are unclear. Follow-up DXA may have a role as a guide to compliance.

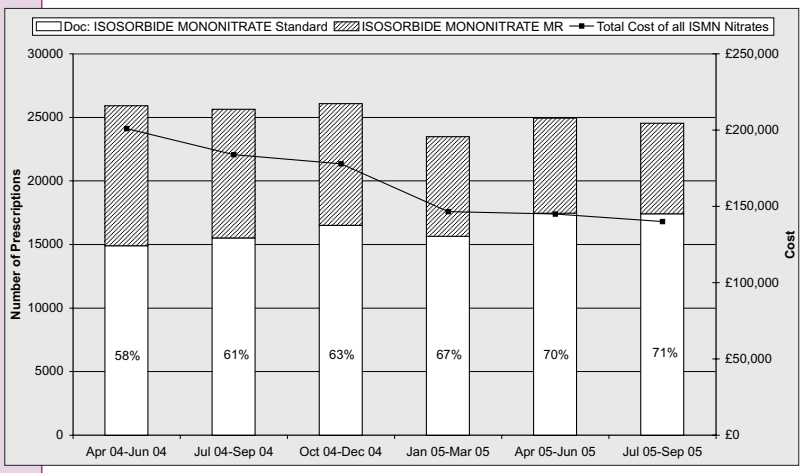
Drugs of choice *contd from page 1*

annual saving is £175k. In the rest of Scotland, 25% of ISMN is prescribed as the standard formulation.

• **Secondary care:** 57% of ISMN prescribed as the standard formulation, an increase of 11% on the previous year.

• Within primary care, one of the indicators used to determine nGMS contract prescribing actions encourages GPs to prescribe this formulation with a target of ≥ 60% of ISMN scripts. 45 practices are working on this as one of their three nGMS prescribing actions.

GGPCD - Isosorbide Mononitrate (ISMN)



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