# MedicinesUpdateAcute

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Information included is specific to the use of medicines in the **adult** setting.

## Key Electronic Medicines Information Resources

### *NHSGGC Information Sources*

**GGC Medicines**

(www.ggcmedicines.org.uk)

As described previously the Therapeutics Handbook and other useful information is available via the website and GGC Medicines App (Apple & Android).

**Clinical Guidelines Electronic Resource Directory**

Detailed GGC clinical guidelines may be found via the Clinical Info section of StaffNet (including some specialist guidelines not included in the handbook). The gentamicin/vancomycin calculators can also be accessed here.

**Intravenous Medicines Monographs (aka "Medusa")**

Monographs providing information to assist with the preparation and administration of intravenous medicines in adults and paediatrics are also available via the Clinical Info section of StaffNet.

### *General Resources*

**The Knowledge Network (TKN)**

www.knowledge.scot.nhs.uk

Visiting TKN and *registering for an Athens password* provides access to a wealth of information for NHS Scotland staff including:

- >5000 online journals and eBooks
- Medline/Embase databases

## Featured resource: Medicines Complete

www.medicinescomplete.com

**Electronic BNF**

- Updated monthly (print version is twice yearly).
- Also available as an Apple & Android App.

**Stockley's Drug interactions**

- Provides assessment of the clinical relevance of interactions and advice on alternative choices.

**Martindale : The Complete Drug Reference**

- Contains > 5800 drug monographs and > 675 disease treatment reviews (cross referenced)
- Monographs give more detail on indications and place in therapy than the BNF provides.

**TIP**

- Log in to Medicines Complete from any NHS Scotland PC and access to BNF will be automatic (N.B. BNF ***for Children*** appears first – ensure correct icon is chosen)
- To access Stockley & Martindale :
  1. *Click "Sign in with a different account"*
  2. *Cick "Sign in via OpenAthens"*
  3. *Use Athens password to sign in*

**Electronic Medicines Compendium (eMC)**

www.medicines.org.uk

Access to manufacturer's Summaries of Product Characteristics (SPCs) for the majority of UK licensed medicines. SPCs contain similar information to the BNF but have more detail on licensed indications, incidence of adverse effects, pharmacokinetics and pharmacodynamics. They can also help to identify brand specific information (e.g. the excipients).

## PPIs and hypomagnesaemia

In April 2012 the MHRA issued advice about the risk of hypomagnesaemia with long term proton pump inhibitor (PPI) use. Consequently the NHSGGC Biochemistry department issued advice regarding the checking of magnesium levels (see July 2012 edition of PostScript). The incidence of hypomagnesaemia with PPI use is unknown, however, it is estimated that most cases occur after prolonged treatment (> 1 year). Knowledge of this potential adverse effect of PPIs is important for patient care as these symptoms may often be non-specific and the link between PPI use and low magnesium levels may be overlooked.

An audit was recently conducted within NHSGGC acute care to assess the management of patients with hypomagnesaemia on a PPI and to determine the awareness of junior medical staff about this risk.

### *Key results were:*

- 47 patients were included
- 18 (38%) patients had a magnesium concentration measured on admission and in 5 (28%) of these patients, their magnesium level was low (< 0.7 mmol/L)
- 100% of patients with low magnesium had PPI withheld
- 56% of junior doctors stated they were aware that PPIs can cause hypomagnesaemia
- 57% of junior doctors stated they understood the management of patients with hypomagnesaemia on a PPI

### *Case Study*

A serious case of hypomagnesaemia associated with PPI use was identified during the audit period. A young male patient was admitted with convulsions. Despite repeat administration of benzodiazepines he remained in status epilepticus. He had a three month history of PPI use and no other obvious cause for the seizures. Medical staff identified the PPI as a potential cause of low magnesium and requested an urgent serum level. The level was 0.26 mmol/L (0.7 – 1 mmol/L) and the patient received a magnesium infusion. The convulsions subsided after correction of the low magnesium. The PPI was discontinued and a yellow card submitted to the Medicines Healthcare and Regulatory Authority (MHRA).

**KEY MESSAGES**

- PPI-induced hypomagnesaemia is an adverse effect of PPIs and should be considered if a patient presents with symptoms and has been on PPI therapy (especially if for > 1 year).
- Symptoms of hypomagnesaemia include muscle twitches, tremor, vomiting, fatigue, delirium, arrhythmias and convulsions.
- If a patient does have low serum magnesium levels whilst on PPI therapy, the indication should be noted and alternative drugs should be considered if the PPI is to be stopped.
- Certain patient groups may be more at risk of hypomagnesaemia (e.g. history of alcohol misuse, malnutrition).
- Report suspected adverse drug reactions via the yellow card scheme.

## Safety Updates

Click on the hyperlinked titles below for more detail.

PPIs: Risk of Clostridium Difficile Infection (CDI)

There is now further evidence that proton pump inhibitors (PPIs) can increase the risk of CDI and consideration should be given to stopping or reviewing the need for PPIs in patients with or at high risk of CDI.

Domperidone: further restrictions

The MHRA has issued further restrictions on domperidone. **Please note**: As of Sept 2014, domperidone is no longer available without a prescription.

Ferumoxytol: serious hypersensitivity reactions

To minimise the risk of serious hypersensitivity reactions with ferumoxytol, the medicine is now contraindicated in patients with ***any*** drug allergy. In addition IV injection is no longer recommended – all doses should be given by infusion over at least 15 minutes. Local protocols/guidelines for the use of IV iron (if they include ferumoxytol) should be reviewed in light of MHRA advice.

Denosumab: hypocalcaemia and osteonecrosis

Due to the risk of denosumab-induced osteonecrosis and hypocalcaemia additional monitoring, prior to and during treatment, is now recommended in certain patient groups.

# Dementia and pain management

One in four general hospital beds in the UK are occupied by patients over 65 years who have dementia. Almost all staff groups will interact with patients with dementia and must be aware of the needs of this patient group and the impact that an admission to hospital may have on them (to learn more, access the LearnPro module).

As dementia progresses the patient's ability to express thoughts, feelings and needs can reduce, until the only way to communicate and express their self is by behaviour. Pain is a common cause of distressed behaviour in a patient with dementia and studies have shown the following:

- A systematic approach to pain management can significantly reduce agitation and aggression in nursing home residents with moderate/severe dementia
- Post operatively, patients with dementia received one third of the pain relief offered to cognitively intact adults who could express their pain.

**KEY MESSAGES FOR PAIN MANAGEMENT**

- Determine if the patient's past medical history includes persistent pain.
- Ensure that Medicines Reconciliation has been completed and includes the patient's analgesic history.
- Ensure that an appropriate pain assessment has been undertaken. The PACSLAC tool can be used to assess pain in patients with limited ability to communicate.
- Consult the Therapeutics Handbook for advice on the choice of analgesic; consider also the adverse effect profile of the analgesic e.g. confusion, drowsiness, constipation.
- Prescribe 'regular' rather than PRN analgesia.
- Consider liquid or patch formulations if the patient has difficulty swallowing tablets.
- Regularly assess and review the pain management plan.

**REMEMBER**

- Patients with dementia may not be able to identify or describe pain.
- Behavioural changes in patients with dementia could be due to pain.

## Guideline News

| GGC Guidelines now available on StaffNet |
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| Hypoglycaemia Treatment in Diabetic Adults in Hospital |
| Rivaroxaban, Treatment of DVT or PE |
| Antibiotic Prophylaxis in Interventional Radiology |
| Antibiotic IV Oral Switch Therapy in Adults |
| Alert Antimicrobial Policy and Monitoring Form |
| Antibiotic Prophylaxis in Surgery General Principles |
| Penicillin Allergy Poster |
| Oral Non-Steroidal Anti-inflammatory Guidelines* |

**Click here for a bulletin complementing the NSAID guideline (includes summary of evidence and some patient scenarios)*

| SIGN Clinical Guidelines |
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| Primary cutaneous squamous cell carcinoma (SIGN140) |
| **NICE Clinical Guidelines*** |
| Atrial fibrillation (CG 180) |
| Drug allergy (CG183) |
| Dyspepsia and GORD (CG184) |
| Long-acting reversible contraception - update (CG30) |
| Chronic kidney disease (CG182) |
| Lipid modification (CG181) |

**NICE Guidelines are developed for prescribers in NHS England and Wales and as such may not always follow NHS Scotland prescribing policy e.g. SMC advice. They should always be used in conjunction with relevant NHSGGC Formulary and Clinical Guidelines.*