PostScript Acute

NHS Greater Glasgow and Clyde

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In this issue:

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

1. Summary of major changes to GGC Therapeutics Handbook

The 4th edition of the GGC Therapeutics Handbook will be circulated at the beginning of August 2011 on all acute sites and is valid until August 2012. An electronic version will also be available on StaffNet Clinical Info section. The 4th edition has been extensively revised since the publication of the 3rd edition in August 2010. This article covers some of the major changes since the 3rd edition. Users are encouraged to familiarise themselves with guidelines in the handbook relevant to their area of practice.

General changes

- This year, the surgical and medical thromboprophylaxis guidelines have been combined into one. The guideline outlines the management options for patients at high risk and low risk of developing thromboembolism. It is not applicable to orthopaedic, neurosurgery, ENT and obstetric patients, for whom there are separate speciality-specific algorithms which can be accessed locally.

- In stroke guidelines, the first line antiplatelet of choice in secondary prevention is now clopidogrel whilst aspirin and dipyridamole are now second-line options. This change is reflected in the antiplatelet guideline in the handbook.

- There is a new alcohol withdrawal guideline included which uses the Glasgow Modified Alcohol Withdrawal (GMAWS) scoring system to assess and manage patients. The GMAWS scale has not been included in the handbook but is available on StaffNet Clinical Info section.

- The phenytoin dose calculation guideline has undergone revision. The endeavour is to make information on loading doses, maintenance doses and dose adjustments clearer.

- Infection section – major changes to this section are detailed under 'Infection section changes'.

- A summarised version of the new national Diabetic Ketoacidosis (DKA) protocol has been included. It outlines some of the precipitating causes of DKA including those which can worsen the condition and the key steps in its management. The care pathways for DKA are available via StaffNet or via (http://www.diabetesinscotland.org.uk/Publications.aspx?catId=4).

- Key steps in the management of Hyperglycaemic hyperosmolar state (HHS) / hyperosmolar non-ketotic coma (HONC) guideline are outlined with additional guidance on potassium monitoring and replacement included.

- There is a new guideline with an insulin sliding scale for diabetic patients, including those going for surgery. This guideline outlines the principles of glucose management in this patient group and includes guidance on maintaining fluid and electrolyte balance. A separate guideline for diabetic patients receiving enteral feeding already exists. Neither of these guidelines is appropriate for patients with DKA, HONC / HHS.

- The palliative care section has been updated following the publication of the GGC Palliative Care guidelines 3rd edition. There remains information on opioid initiation, dose conversion, managing breakthrough pain, dose titration, adjuvant therapy choice and includes more information on the symptom management of patients in last days of life.

- New dosing advice on oral paracetamol in patients with low weight, who are glutathione deficient or have renal / hepatic impairment, has

Summary of major changes to GGC Therapeutics Handbook (continued)

- been included. This is a guide only and should be considered in conjunction with the patient's general pain management.

- General guidance on the use of normal immunoglobulins has been included.

- Dopamine and dobutamine dosing tables have been removed from the handbook. Currently there is inconsistency across sites regarding drug concentrations used therefore local guidance should be consulted instead.

Infection section changes

- A recommendation that gentamicin should be avoided in patients with decompensated liver disease (jaundice, ascites, encephalopathy, variceal bleeding, or hepatorenal syndrome) has been added. Advice on suitable alternatives can be obtained from microbiology or Infectious Diseases as necessary.

- A reminder has been added of the importance of starting IV antibiotic administration in sepsis as soon as possible (within 1 hour of recognising the signs of sepsis/severe sepsis). Each hour of delay in administering IV antibiotic therapy increases mortality.

- Advice on the interaction between antibiotics and the contraceptive pill has been updated. Additional contraceptive precautions are no longer required when a combined oral contraceptive is used with antibiotics that do not induce liver enzymes, unless diarrhoea or vomiting occurs.

- The IV-oral antibiotic switch therapy (IVOST) guideline has been updated. Staphylococcus bacteraemia and cystic fibrosis have been added to the list of indications appropriate for IV antibiotic administration. The switch recommended from IV amoxicillin + IV gentamicin for empiric therapy of pyelonephritis is oral co-amoxiclav. For empiric therapy of intra-abdominal sepsis the oral switch recommended is co-amoxiclav (first line choice) or ciprofloxacin + metronidazole (for penicillin allergic patients).

- Amikacin, IV colistin, levofloxacin & moxifloxacin have been added to the list of Alert Antibiotics.

- Advice on the management of proven *S aureus* bacteraemia has been added. A minimum of 14 days IV therapy is indicated and all patients require echocardiography and investigation for a possible underlying source. Continuous IV infusion is recommended when vancomycin is used.

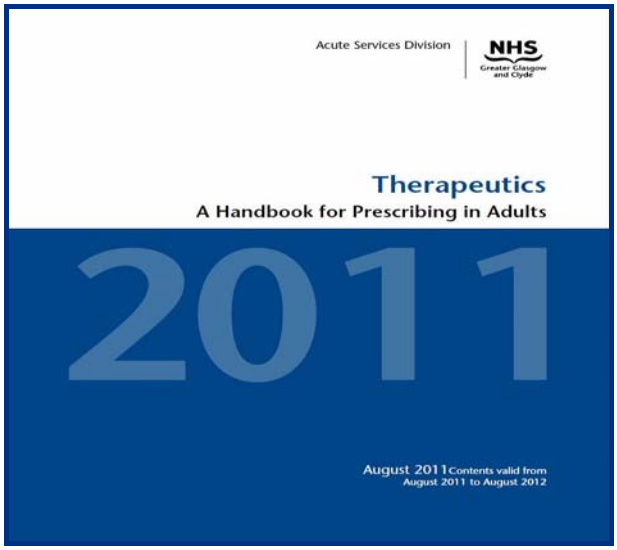
- Clarification has been added that antibiotic therapy is required if the skin has been punctured in (non-human) mammalian bites even if there is no evidence of acute infection.

- The statement that metronidazole should be avoided in second relapses of *Clostridium difficile* infection (in view of the cumulative risk of peripheral neuropathy) has been added.

- In line with recent HPA guidance, ciprofloxacin (single dose) now replaces rifampicin as the preferred oral agent for meningitis contact prophylaxis. While ciprofloxacin has an unpredictable effect on epilepsy it is preferred to rifampicin if the patient is taking phenytoin and is also the recommended option for meningitis prophylaxis in pregnancy.

- The need to monitor for pulmonary toxicity secondary to nitrofurantoin has been added to the UTI prophylaxis section.

- Advice on dealing with unexpectedly high and low vancomycin and gentamicin concentrations has been added.



The handbook is updated yearly and all users are encouraged to provide feedback to the editorial group (faria.qureshi@ggc.scot.nhs.uk).

2. Normal Immunoglobulins

The GGC Plasma Products Group is leading a piece of work to monitor the use of normal immunoglobulins across the Board. Normal immunoglobulins are plasma products that are used to treat patients with primary immunodeficiencies which, in certain cases, are life-threatening. Normal immunoglobulins are prone to temporary shortages and it is imperative to minimise the impact of these shortages by limiting their use to patients who have a clear indication for treatment. In addition, normal immunoglobulins represent a significant cost pressure for GGC. The ordering of these medicines is subject to specific documentation, which is available from pharmacy upon request, and ongoing audit.

A comprehensive list of permitted indications, agreed nationally, can be found in the Clinical Info site on StaffNet at:
http://www.staffnet.ggc.scot.nhs.uk/Clinical%20Info/Clinical%20Guidelines/Clinical%20Guidelines%20By%20Clinical%20Topic/Documents/185_Guidelines-immunoglobulin.pdf

Indications have been classified into a colour coding system depending on their clinical priority: red (high priority), blue (medium priority), grey (low priority) and back (use not appropriate).

Normal immunoglobulins should be prescribed generically. Any contraindications/ allergies to specific brands must be specified in the request form and kardex. Treatment must be initiated and reviewed by a Consultant.

Treatment with normal immunoglobulins for grey or black indications is considered non-Formulary within GGC. Any indication not listed in the National Guidelines is also non-Formulary. An Individual Patient Treatment Request (IPTR) Form 3 must be completed for each of these cases and use must be approved by the relevant Clinical Director prior to any supplies being issued.

The GGC Plasma Products Group is developing specific guidance to aid prescribers. A table with guidance on maximum dosing weight for adult patients prescribed normal immunoglobulins will be added to the Clinical Info site on StaffNet. Future guidance will include recommended method of administration and monitoring requirements for patients on normal immunoglobulins. Look out for updates on StaffNet.

3. New GGC Guidelines for Alcohol Withdrawal Syndrome

(article written by Dr E Forrest on behalf of GGC Alcohol Management Pilot Project Steering Group)

They say that necessity is the mother of invention. If this is the case then it is clear that when it came to the management of alcohol withdrawal in acute care within GGC something needed to be invented. Poorly treated alcohol withdrawal syndrome (AWS) is dangerous to the individual patient, staff and other patients. The patients at risk of AWS are not always the archetypal 'alcoholic': with the prevalence of alcohol so high in the West of Scotland the patient presenting with chest pain or the elective admission for a hernia repair may be equally at risk of developing AWS after hospitalisation. This is a trans-speciality and trans-hospital problem. However, a consultancy commissioned in 2003/4 by GGC identified widely different approaches to this common clinical problem.

In this context a multi-disciplinary group was established within GGC to review three areas:

- Assessment of alcohol misuse
- Prescription of vitamins for the prevention and treatment of alcohol-related brain disease (ARBD).
- Assessment and management of AWS

Following these reviews, pilot projects were carried out in the acute medical units of the Western Infirmary and Glasgow Royal Infirmary (GRI) (February to April 2009) and in all clinical areas at GRI (November 2009 to January 2010). This led to the development of a new GGC guideline for AWS.

Assessment of Alcohol Misuse

The FAST score (an abbreviated form of the longer AUDIT questionnaire) to determine hazardous drinking was used. In the first pilot it was used alongside the more familiar CAGE questionnaire which is an indicator of alcohol dependency rather than hazardous misuse. In the pilot, the FAST was found to be easy to apply in a busy acute medical admissions ward. In addition it was found that the FAST could be used not only to identify hazardous drinkers (score≥3), but also correlated very well with CAGE positivity when ≥9. Thus a single assessment tool (FAST) can be used to differentiate between hazardous drinkers (who might benefit from brief intervention from ward staff) and dependent drinkers (who might benefit from referral to the alcohol liaison team).

Vitamin Prescription

The recommendations for vitamin prophylaxis and treatment of ARBD were more simply derived from those from the Royal College of Physicians, London. In practice it was found that some patients were being inappropriately prescribed intravenous vitamin solutions whilst others with clear indications were receiving little or no supplementation. The guidelines try to simplify the process by identifying low risk (green), high risk (amber) and incipient/ overt (red) Wernicke's encephalopathy. The traffic light approach indicates those requiring parenteral vitamins and those who can be managed with oral thiamine alone. The guidelines do not recommend the use of oral compound vitamin B preparations. Rather a more comprehensive assessment of malnourished patients is suggested with targeted nutritional support as required.

Management of AWS – why change to GMAWS?

The published literature on the management of AWS often compares fixed dose benzodiazepine treatment or symptom-triggered treatment (usually using the Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised: CIWA-Ar). The group felt that patients at high risk of agitated AWS would benefit from a fixed dose approach with additional treatment as indicated by symptoms (a combined approach). The risk factors for such an approach were two of the following: previous agitated withdrawal, current or previous alcohol-related seizures, a high FAST score, or a high initial symptom score. Lower risk patients could be managed using symptom-triggered treatment alone.

The group reviewed several published symptom scores as difficulties with CIWA-Ar compliance had been raised. A modification of two Australian scores was proposed: the Glasgow modified alcohol withdrawal score (GMAWS). In the initial pilot GMAWS was used at Glasgow Royal Infirmary whilst the Western Infirmary continued using CIWA-Ar within an otherwise identical protocol. The conclusion of the pilot was that each score performed equally well but that the GMAWS was preferred by nursing staff: it was less subjective and more straightforward. The pilot also allowed abbreviation of the score to just 5 variables: tremor, sweating, hallucinations, orientation and agitation.

Guidelines

The above recommendations all come wrapped within comprehensive guidelines which also address the issues of managing severe AWS not responding to standard treatment and the management of exceptional patients such as those with advanced liver disease. The guidelines have now been approved by the ADTC and are supported by the Associate Medical Directors and Heads of Nursing within GGC. The alcohol liaison teams are currently training nurses at all hospital sites in GGC in the use of the guidelines. In some areas the guidelines have been used for some time with dramatic reductions in the rates of alcohol-related incidents and subsequent lengths of hospital stay for alcohol-related diagnoses reported.

As described under changes to the GGC Therapeutics Handbook - details of the recommendations within the new guidelines are included in the 4th edition.

Unfortunately AWS will be with us in acute care for the foreseeable future, however with a comprehensive and user-friendly guideline it is hoped that at the least we can manage it more safely and effectively.

Details of the Pilot projects and the Guidelines can be found on StaffNet:
http://www.staffnet.ggc.scot.nhs.uk/Partnerships/Addictions/Pages/AMPP.aspx

4. Guideline news

SIGN and NICE clinical guidelines produced since March 2011 are highlighted in this section.
For more information refer to www.sign.ac.uk or www.nice.org.uk

SIGN Guideline Title	Guideline Number	Date
Management of adult testicular germ cell tumours	124	March '11
Management of asthma (update to May'08 version)	101	May '11

NICE Guideline Title	Guideline Number	Date
Lung cancer	121	April '11
Ovarian cancer	122	April '11
Common mental health disorders	123	May '11
Hip fracture	124	June '11

NHSGGC Acute Care

Local NHSGGC guidelines are available on StaffNet via the Clinical Info button.