LOTHIAN PRESCRIBING BULLETIN

Supporting prescribing excellence - informing colleagues in primary and secondary care

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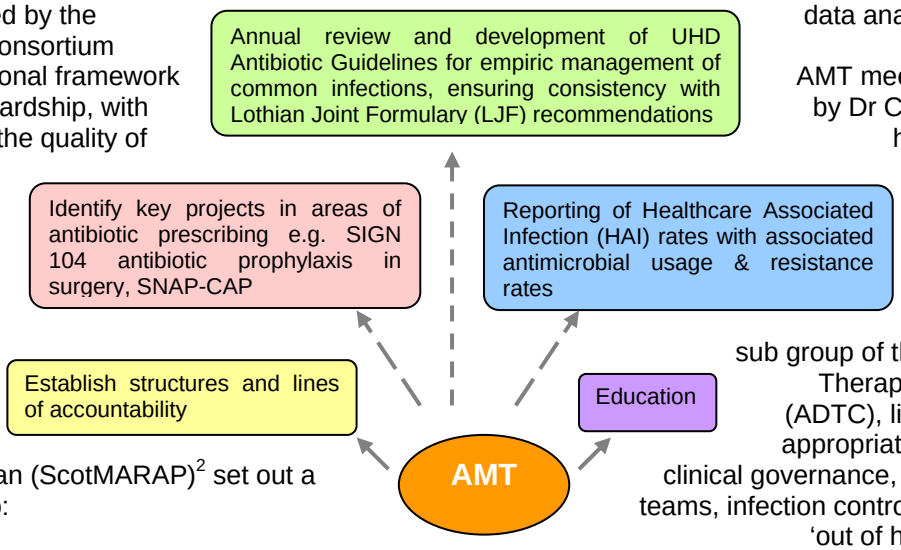
Introducing the Lothian Antimicrobial Management Team

All NHS Boards in Scotland have now established Antimicrobial Management Teams (AMTs) to support the prudent prescribing of antimicrobials across both primary and secondary care, and a Scottish Government letter summarised the national policies[1] The Scottish Antimicrobial Prescribing Group (SAPG), hosted by the Scottish Medicines Consortium (SMC), acts as a national framework for antimicrobial stewardship, with the aim of improving the quality of antimicrobial prescribing and infection management. This overarches all NHS Board AMTs.

The Scottish Management of Antimicrobial Resistance Action Plan (ScotMARAP)[2] set out a five-year work plan to:

- reduce antimicrobial resistance
- promote prudent antimicrobial prescribing
- develop a strategic approach to the systematic identification and containment of future resistant organisms.



The Lothian Team

Core members of the Lothian AMT are the infection control manager (Fiona Cameron), lead physician (Dr David Wilks), microbiologist (Dr Karen Macsween), pharmacists (Alison Cockburn and Carol Philip) and data analyst (Vicky Elliot).

AMT meetings are chaired by Dr Casey Stewart and have wide ranging representation and links with stakeholder groups.

The AMT is a sub group of the Area Drug and Therapeutics Committee (ADTC), linking closely with appropriate bodies such as, clinical governance, risk management teams, infection control committees and 'out of hospital' agencies.

To contact the Lothian AMT, email
Carol Philip carol.philip@nhslothian.scot.nhs.uk or Alison Cockburn acockburn@nhs.net.

Measurement and Audit

All NHS Boards will be measured on improvements made across primary and secondary care by monitoring:

- antibiotic use
- prescribing indicators (some being nationally set)
- HEAT NHS performance targets (Health improvement, Efficiency, Access, Treatment) reductions in rates of *C. difficile* and *Staph. aureus* bacteraemias (including MRSA)
- Scottish National Audit Project – Community Acquired Pneumonia (SNAP-CAP)**;** a care bundle approach to improve outcomes in Community Acquired Pneumonia

References

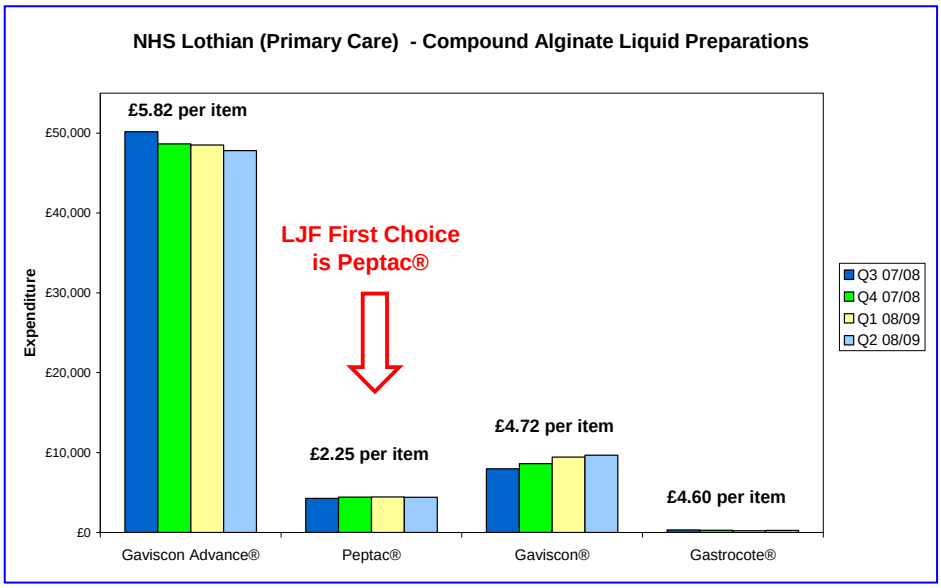
1. CEL 30(2008). The Scottish Government. 8 July 2008. www.sehd.scot.nhs.uk/mels/CEL2008_30.pdf
2. The Scottish Management of Antimicrobial Resistance Action Plan (ScotMARAP). NHS Scotland. July 2008. http://cci.scot.nhs.uk/Resource/Doc/215645/0057700.pdf

GI chapter review highlights poor prescribing pattern

The gastrointestinal (GI) section of the LJF has recently been updated. The full chapter can be viewed at www.ljf.scot.nhs.uk. Some of the main points are detailed below.

Compound alginic acid preparations (LJF section 1.1 and 1.3a)

LJF first choice alginate remains Peptac® suspension and is the most cost effective liquid alginate. Despite this being first choice for 3½ years, prescribing levels remain very low compared to the other liquid alginates (see graph). In the last quarter Q2 08/09 Peptac® suspension accounted for only 16% of the number of items and 7% of the expenditure, when compared to all liquid alginates prescribed. Based on the cost per item calculated from the current expenditure, if all the items prescribed were Peptac®, the cost saving for NHS Lothian would be approximately £140,000.



Acute upper and lower gastrointestinal bleeding (LJF section 1.3d)

SIGN recently produced guideline number 105 on the management of GI bleeding. In patients presenting with upper GI bleeding, proton pump inhibitors (PPIs) should not be used, prior to diagnosis by endoscopy. Patients with a high risk of re-bleeding receive endoscopic therapy to achieve haemostasis. In these patients high dose intravenous PPI (omeprazole or pantoprazole) should be used. (80mg bolus followed by 8mg/hour infusion for 72 hours.) In all other patients an oral PPI should be initiated when appropriate, to start the ulcer healing process. There is no need for intravenous PPIs in this patient group.

Chronic bowel disorders (LJF section 1.5)

There is now clear evidence that topical mesalazine is better than topical steroids for acute exacerbations of inflammatory bowel disease.[1] Steroid enemas may be an option in those who have failed on or not tolerated mesalazine suppositories or enemas.

Reference

1. IBD section of the British Society of Gastroenterology. Guidelines for the management of inflammatory bowel disease in adults. Gut 2004;S3(*Suppl V*).

LJF recommendations for the use of NSAIDs

The LJF recommendations on the prescribing of NSAIDs in musculoskeletal and joint diseases have been updated. Please refer to the Lothian Prescribing Guideline for the use of NSAIDs (LJF Rheumatology Working Group, June 2008) www.ljf.scot.nhs.uk/resources/nsaids_algorithm_v1-0.pdf

Paracetamol and/or topical NSAIDS should be considered before oral NSAIDS, particularly for pain relief of knee or hand osteoarthritis, in accordance with NICE guidance. This is a change from previous advice, which recommended use of topical rubeficients.

LJF section 10.1.1

First choice: ibuprofen
Second choice: diclofenac sodium

Patients at high risk of serious gastro-intestinal adverse events:
First choice: NSAID (see section 10.1.1)
+ omeprazole or lansoprazole (see section 1.3)

Cardiovascular risk and NSAIDs

- The main change is that the LJF no longer recommends the use of NSAIDs in patients with cardiovascular risk on low dose aspirin since NSAIDs interfere with the cardioprotective effect of low aspirin
- The relative risks and benefits of prescribing NSAID therapy for pain as opposed to giving low dose aspirin for cardiovascular risk should be assessed on an individual basis
- The LJF previously recommended naproxen in this patient group
- NSAIDs should be avoided if possible
- There is no clear evidence to support one NSAID over another
- If an NSAID is required, naproxen may have a lower thrombotic risk

ASSIGN for CVD risk

The Lothian Lipid Guideline has recently been updated.

The new '1-page Summary' is included with this bulletin.

The changes are minor:

- in secondary prevention, if target not met on simvastatin 40mg, change treatment to atorvastatin 20-80mg (recognising that some patients will require higher 80mg dose)
- The ASSIGN Risk Calculator is recommended to determine CVD risk, and this is available on the LJF website www.ljf.scot.nhs.uk.

Why ASSIGN risk calculator? ASSIGN was developed in conjunction with SIGN guideline 97 from data derived from the Scottish Heart and Health Extended Cohort. This was based on men and women from 25 districts of Scotland, with a series of population studies from the 1980s followed up to 2005.

ASSIGN was developed to include social deprivation as a risk factor and includes the Scottish Index of Multiple Deprivation (SIMD) score for residential postcode. It also includes family history of cardiovascular disease (CVD). Family history is defined as coronary disease or stroke in parents or siblings below the age of 60 or in several close relatives, so indirectly includes ethnic susceptibility. Like Framingham it does not include obesity as a risk factor; unlike Framingham it excludes LVH as a risk factor.

It is likely that using the ASSIGN method will get the most accurate estimation of CVD risk for our patients. Remember estimating CVD risk can only ever act as a rough guide for any one individual and the risks and benefit of treatment should be discussed on an individual basis.

Please note that the full paper version of the guideline is no longer being produced and all existing paper copies should be destroyed as they are out of date. The summary and the full version of the Lipid Guideline can be viewed at www.ljf.scot.nhs.uk.

Rivaroxaban – approved for use in orthopaedic surgery

Rivaroxaban (Xarelto®) is an oral drug that is currently licensed for the prevention of venous thromboembolism (VTE) in adult patients undergoing elective hip or knee replacements. It is a highly selective direct factor Xa inhibitor which interrupts the intrinsic and extrinsic pathway of the blood coagulation cascade inhibiting thrombin formation and therefore the development of thrombi.

Three large phase III randomised, double-blind, double-dummy studies have compared rivaroxaban with enoxaparin for the prevention of VTE following hip or knee replacement surgery. Rivaroxaban was superior to enoxaparin in all studies assessed by the primary and secondary endpoints. Primary endpoint was a composite of any DVT, non-fatal pulmonary embolism (PE) or death from any cause. Secondary endpoint was major deep vein thrombosis (DVT) a composite of proximal DVT, non-fatal PE or VTE-related death.

The Formulary Committee recently reviewed and approved an application for its use in Lothian; it has been added to the formulary for specialist use only.

A complete course of treatment will be supplied by secondary care:

- 10mg orally once daily, starting 6 to 10 hours after surgery, provided that haemostasis has been established
- For hip replacement patients, treatment duration 5 weeks
- For knee replacement patients, treatment duration 2 weeks.

Rivaroxaban is a new drug and as such, all suspected adverse drug reactions (including any considered not to be serious) should be reported at www.yellowcard.mhra.gov.uk.

Key messages:

- **Rivaroxaban is approved for use as prophylaxis for orthopaedic surgery (hip or knee replacements)**
- **The full course of treatment will be supplied from secondary care**
- **Report all suspected adverse drug reactions at www.yellowcard.mhra.gov.uk**

Further information

Rivaroxaban. Scottish Medicines Consortium Report No. 519/08. 8 December 2008. www.scottishmedicines.org.uk.

Lothian hospitals switch to generic piperacillin/tazobactam

A generic preparation of piperacillin/tazobactam is now available in the UK. From January 2009 the generic preparation will be supplied to hospitals across Lothian, with the exception of the Royal Hospital for Sick Children (RHSC).

The branded product (Tazocin®) will continue to be used at RHSC as it is licensed for use in children aged 2 to 12 years of age while the generic preparation is not.

A new intravenous monograph has been prepared for generic piperacillin/tazobactam and is available in all relevant clinical areas. This monograph will be included in version 4 of the Lothian Red Intravenous Manual to be released in early 2009.

The main changes to note in this transition are:

- The preparation must be prescribed generically using the approved international name of 'piperacillin/tazobactam'
- The generic product cannot be mixed or co-administered with aminoglycosides or Ringer's intravenous solution due to incompatibilities.

The unfortunate case of the toddler, the ointment and the ferrets

A recent case report and animal study from the USA highlighted the potential danger from the application of Vicks VapoRub® if applied directly under the nose of young children.[1]

The report tells of an 18-month old girl who was brought to an A&E department with severe respiratory distress. On questioning her carer, it was found that Vicks VapoRub® had been applied to the area around the nostrils contrary to the directions given on product.

The toddler recovered within 24 hours.

The case prompted subsequent research, which was carried out on the tracheal lining of ferrets, as their airway anatomy and cellular composition is reportedly similar to humans and other carnivores. Results showed that exposure to very high concentration of VapoRub® had a number of adverse effects in the ferrets' airways.

The commonly used cough/cold remedy works by "fooling the brain" into perceiving increased airflow by the triggering of cold receptors. The active ingredients however can cause mild inflammation, increased mucus production and decreased mucus clearance. These unwanted effects are thought to be of potential harm only to infants and young children.

'Check before use' - safe use of Vicks VapoRub® - please note that the manufacturer's information clearly states:

× Do *not* use Vicks VapoRub® on infants under six months old
× In children over six months, it should be applied lightly to the chest and back only, and must not be swallowed or placed in the nostrils.

(The electronic Medicines Compendium (eMC) http://emc.medicines.org.uk)

Reference:
1. Abanses JC, Arima S, and Rubin BK. Chest 2009; *135*:143-8.

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