Medication Safety Today

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Heparin mix-ups

Heparin, a potent anticoagulant, hit the headlines recently following a number of incidents in Bristol and the United States where patients received either 100 or 1000 times the intended dose (1,000 units/ml or 10,000 units / ml instead of 10 units / ml) to flush vascular access lines.

Labelling, packaging and the availability of a variety of strengths are factors in many medication incidents involving heparin. The Institute for Safe Medication Practices (ISMP) in the United States list injectable anticoagulants in the top 5 high-risk medicines identified as most likely to cause death or serious harm.

Heparin ampoules

Safety tips

- Review areas stocking heparin products, including heparinised saline, and consider if those products are required.
- Where heparin products are required, consider removing unnecessary strengths from ward stock to avoid selection errors.
- When selecting heparin products, read the product label carefully to ensure the correct strength per volume has been selected. Incidents have occurred where the concentration (strength per ml) has been misinterpreted as the total quantity (strength per container). For example, a 5ml vial of heparin 25,000 units per ml selected thinking it contains a total of 25,000 units per vial rather than the actual 125,000 units per 5ml.

In March 2007, the NPSA issued a safety alert asking the NHS to implement safety actions to reduce the risks associated with anticoagulants, including heparin. This has been distributed by DHSSPS for action in Northern Ireland.
http://www.dhsspsni.gov.uk/hsc__sqsd__28-07.pdf

New Year, New Look

Check out the new NI Medicines Governance Team logo above. We have also developed a new and improved website for the Team. Why not log on to www.medicinesgovernanceteam.hscni.net , where you can view all the back issues of this newsletter, along with safety memos, policies and other work that the team has produced.

It's a class act

Incidents have been reported when a patient has inadvertently received two medicines from the same therapeutic class. These incidents can be prevented by;

- Checking the patient's current medication before prescribing a new medicine.
- Where a patient is being intentionally changed to another medicine from the same therapeutic class, take care to clearly discontinue the first medicine.

Can you identify from the following list of pairs of medicines, which ones should not be co-prescribed?

1. tiotropium and ipratropium
2. ezetimibe and simvastatin
3. nicorandil and isosorbide mononitrate
4. acenocoumarol and warfarin
5. gliclazide and metformin
6. diclofenac and mefenamic acid

Answers are at the bottom of the page

Take particular care with combination products for which there is no generic name, where the duplication may not be immediately apparent e.g. Arthrotec® and mefenamic acid.

If you have any comments on this newsletter, please contact Sharon O'Donnell, Medicines Governance pharmacist on Ext: 2600 at Belfast City Hospital or by e-mail at Sharon.odonnell@belfasttrust.hscni.net
Further copies of this newsletter can be viewed at www.medicinesgovernanceteam.hscni.net or on your Trust intranet.

Answer: 1, 4 and 6

Calculations

What volume of these liquids is required for each prescribed dose?

1. Ranitidine 25mg has been prescribed for a child. It is available as 75mg/5ml solution.
2. Promazine 50mg has been prescribed. It is available as 25mg/5ml suspension.
3. Amitriptyline 10mg at night has been prescribed. It is available as 25mg/5ml solution.

Answers at the bottom of the page

Concentrate!

Incidents have occurred with liquid medicines where the incorrect quantity of liquid has been administered or dispensed. These errors can lead to a significant under or overdose. This is particularly problematic with children, where the majority of commercially available liquid medicines are in concentrations more suitable for adult dosing.

Listed below are some safety tips, which can help prevent this type of incident.

Safety tips

- When prescribing liquid medicines, state the dose in micrograms, milligrams or grams. Where possible, also include the strength of the liquid and the volume required for the prescribed dose.
- Double check all dosing calculations to ensure volume is correct.
- Minimise the number of strengths of the same liquid medicine available in ward or clinic areas and in pharmacy departments.
- If more than one strength of a liquid medicine must be stocked, aim where possible to store these separately from one another, particularly if the packaging is similar in appearance. Shelf labels, which indicate the medicine name and strength, provide a useful visual reminder.
- Always read carefully the strength of the medicine on the outer packaging even if a dispensed label is attached.
- Where the dose is not a 5ml increment, state the dose on the dispensed label as the required volume. Where possible, type this information in a larger font size, so that it stands out more clearly than the rest.[1]
- Always use an appropriate measuring device to measure the dose e.g. an oral/enteral syringe, medicine cup or 5ml spoon, depending on the volume of liquid required.
- As part of the discharge medicines counselling process, inform the patient or carer, of the strength of the liquid medicine provided, the dose and the volume required to be administered. Demonstrate, with the appropriate measuring device provided, how this volume can be accurately measured.

1. NPSA *Design For Patient Safety. A guide to the design of dispensed medicines.* (Edition 1 2007)

Opioid Patches

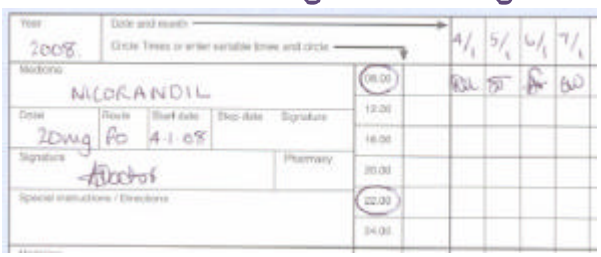
Opioid medicines are classed as high risk due to their greater potential to cause serious patient harm. A recent report highlighted the importance of increasing the awareness of storage and disposal of fentanyl patches.

A fentanyl patch became stuck to a child's thigh whilst playing at a friend's house. His mother noticed the patch the following day but by this stage the child was exhibiting signs of opioid toxicity. Fortunately the patch was removed before any further harm was done and the child made a full recovery.

- The risk associated with inappropriate use/storage/disposal of all opioid patches should be considered before prescribing opioids via the transdermal route.
- Patients on opioid patches should be advised about safe storage and disposal as part of counselling on their discharge medicines, as detailed in the patient information leaflet.
- Always ensure that a patient information leaflet is dispensed with all prescriptions.

Adapted from IMPRESS Newsletter, WHSSB, Sept 2007

Something's missing



Always check the prescribed frequency when administering medicines. Don't simply follow the pattern of administration signatures from previous days.

This prescription was for nicorandil 20mg twice a day. The 10pm dose was omitted on the first day and then subsequently omitted on the following three days.

Where a dose is being intentionally omitted, remember to document this using the appropriate code and do not leave the administration box blank.

When reviewing patient's medicines, always check the administration record to confirm that the patient is receiving the medication as prescribed.

Remember, always administer against the prescribed time.

Answers

(1) 1.7ml (2) 10ml (3) 2ml