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shortening their hospital stay.

They are administered using intravenous or subcutaneous injection and are considered to be used in the prevention and treatment of venous thromboembolism (VTE) and are used in the prevention and treatment of deep vein thrombosis (DVT). Why do we need to improve practice?

Dosing errors with LMWHs can occur if the prescribed treatment dose is not calculated using the patient’s current body weight. Reports indicate some patients are not weighed prior to dosing, weight is estimated, recorded inaccurately or doses based on weight are miscalculated. Improperly administered LMWH requires ICU for respiratory support.

How to use the Rapid Response Report to change practice

Lisa Jones, ward manager, medical admissions unit, Glen Oryol Hospital, Bettel Caedwalla University Health Board, believes nurses have a vital role to play in reducing heparin treatment dose errors. "There can be many reasons for prescribing low molecular weight heparins. Mainly is either prophylactic or for the treatment of acute coronary syndrome (ACS) or thrombosis such as pulmonary embolism (PE) or deep vein thrombosis (DVT). "Used prophylactically, there is a standard dose but even then there are risks attached and factors such as the patient’s renal function need to be considered, so a good patient history is crucial. "But when used for the treatment of related conditions, the dose is weight related, so if you simply guess or estimate the weight of the patient you are at risk of underdosing or overdosing, both which have serious implications. "We have found the most important factor in reducing dose error is making sure staff have equipment readily available to hand that allows them to weigh patients. "We used to have just one set of scales for the unit; we now have one for each bay, some of which are patients can sit on and some which patients can stand on. The trust is also looking into purchasing bariatric scales, as we have two scales for weighing patients who are on a trolley or in a wheelchair. "We hold regular thromboprophylactic study days, linked closely with drug companies, to build up and refresh the staff’s knowledge. To improve risk assessment, we also currently have a staff nurse dedicated to thromboprophylaxis, education and risk assessment.

Find the Rapid Response Report and supporting information on the NPSA website tinyurl.com/npsaguidance

How do I know?

An observational study in 2007 looking at 10,687 patients identified that almost half the patients treated with enoxaparin did not receive a recommended dose.

1. Older people living in the community with unavailable weight data appear to be more likely to have a high risk of mortality.
2. For patients with mobility problems, scales are available for hosts and stand aids, wheelchair and bed devices also exist.
3. A number of trusts have implemented strategies that include the use of practical dosing calculation tools to reduce calculation errors with LMWH. These have been incorporated in medication charts, policies, posters and other readily available formats.

You can share ideas or interventions successfully implemented by visiting the discussion thread titled Reducing treatment dose errors when using low molecular weight heparins.

The importance of getting a correct patient weight when prescribing heparin can be easily underestimated without improving staff knowledge

For patients with mobility problems, scales are now scales that weigh patients who are on a trolley or in a wheelchair. There are now scales that weigh patients who are on a trolley or in a wheelchair. All of these trusts have been incorporated in medication charts, policies, posters and other readily available formats.

The battle we do have is ensuring that nurses have the time and provision to weigh patients and to encourage doctors to use the desktop icon with every patient.

"Routines who are more experienced and have been on the thromboprophylactic course for longer are aware of the dangers of incorrect prescribing and are more likely to pull doctors up on that. The challenge, as on an acute unit with junior doctors on rotation, is keeping that level of knowledge and awareness constant. "Our trust was formerly three different trusts. Now we have joined together, the same drug chart is used across a larger patient population and we are standardising prescribing, we have also got good pharmacy support which is crucial.

The National Patient Safety Agency outlines how errors associated with doses of low molecular weight heparin can be reduced

When used for the prevention of VTE, a standard dosing regimen is used. When treating a thromboembolic event the dose is dependent on the weight of the patient. The weight must be accurately recorded in kilogram in the inpatient medication chart (when in use) and clinical record. Patients should be weighed at the start of therapy and, where applicable, during treatment. Treatment dose regimens also depend on the clinical indication for therapy. Underdosing or overdosing can lead to serious consequences for the patient. Between 1 January 2005 and 1 September 2009 the National Patient Safety Agency received 2,716 reports relating to errors with LMWH. Dosing errors with LMWHs can occur if the prescribed treatment dose is not calculated using the patient’s current body weight. Reports indicate some patients are not weighed prior to dosing, weight is estimated, recorded inaccurately or doses based on weight are miscalculated. Improperly administered LMWH requires ICU for respiratory support.

FIVE WAYS TO MAKE PRACTICE SAFER IN YOUR HOSPITAL

1. Ensure you are using an accurate patient weight

Accurate patient weight should be obtained and recorded at first contact with primary or acute care and throughout treatment. Reasons for not obtaining weight should be clearly documented.

2. Do not estimate weight

It is often inaccurate and can lead to incorrect dosing. The range of weighing equipment available should prevent the need for estimation in all but the most exceptional circumstances.

3. Check your equipment

Your weighing device should meet the requirements for clinical weighing scales. For information: tinyurl.com/DHscales

4. Consider patient mobility

Many patients in primary and acute care cannot stand on a set of scales. Weighing equipment should be suitable and available for the intended patient group.

5. Use dose calculation tools

These should be available at the time of prescribing and administering LMWHs. Lack of equipment should be highlighted using local risk assessment processes.

The importance of getting a correct patient weight when prescribing heparin can be easily underestimated without improving staff knowledge

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