



Patient Safety Alert

Stage One: Warning

Harm from using Low Molecular Weight Heparins when contraindicated

19 January 2015

Alert reference number: NHS/PSAW/2015/001

Alert stage: One - Warning

Low Molecular Weight Heparins (LMWHs) are frequently used for treatment and for prophylaxis of a variety of thromboembolic conditions. In the 26 months up to March 2014 the National Reporting and Learning System (NRLS) received 75 medication incidents where LMWHs were used despite known contraindications. Incidents included use of LMWH for either treatment or prophylaxis. Of these, 16 incidents resulted in severe harm or death, 29 involved inappropriately co-prescribed medication, 16 where there was concomitant bleeding, 11 failures to discontinue LMWH and 19 describing a range of other contraindications.

Although there are important benefits from the use of LMWHs, it is vital to assess each patient individually as to whether the benefits outweigh the risks. It is apparent from these incidents that there were missed opportunities to appropriately risk assess the patient for pharmacological or clinical contraindications to the use of LMWHs.

There can be various circumstances when the use of LMWHs may be contraindicated. These can include but are not limited to: active bleeding; acquired bleeding disorder (such as acute liver failure); concurrent use of anticoagulants known to increase risk of bleeding; concurrent use of anti-platelets and other interacting medicines; or, lumbar puncture/epidural/spinal anaesthesia within the previous four hours, or expected within the next 12 hours.^{1,2}

Examples of NRLS incidents read:

'Patient prescribed and given dalteparin with known head injury prior to consultant review, extensive head injury and therefore contraindication. Patient went on to develop a large subdural haematoma secondary to a slow bleed.'





'Patient admitted on warfarin, co-prescribed enoxaparin, INR 3.6 on admission but not checked regularly thereafter, and on clarithromycin. Patient became unwell, (INR 10) bilateral subdurals found five days later. Entered a phase of prolonged seizures and subsequently died.'

Consideration of contraindications is a prominent feature of available local and national guidance for prescribing and administering LMWHs. This alert aims to reinforce the need for reliable systems to ensure that this always occurs.

Actions

Who: All hospitals and community services providing NHS funded care where Low Molecular Weight Heparins are prescribed, dispensed or administered.

When: To commence immediately and be completed by 2 March 2015

-  Establish if incidents have occurred, or could occur, in your organisation where Low Molecular Weight Heparins have been used despite a known contraindication.
-  Consider if immediate action needs to be taken locally and ensure that an action plan is underway, if required, to reduce the risk of further incidents occurring.
-  Disseminate this alert to all medical, nursing, pharmacy and other staff who are involved in the prescribing, dispensing and administering of Low Molecular Weight Heparins.
-  Share any learning from local investigations or locally developed good practice resources by emailing ENGLAND.Medication-Safety@nhs.net.

Alert reference number: NHS/PSA/W/2015/001

Alert stage: One - Warning

Technical notes

NRLS search dates and terms

1 January 2012 to 31 March 2014, if reported by 28 April 2014.

('lmwh' OR 'low molecular weight heparin' OR 'clezan*' OR 'fragm*' OR 'daltep*' OR 'enoxa*' OR 'tinzap*' OR 'innohep' OR 'bemip*' OR 'zibor')

AND ('hemor*' OR 'bleed' OR 'bled' OR 'overcoag*' OR 'over-coag*')

Stakeholder engagement

Surgical Services Patient Safety Expert Group (PSEG), Medical Specialties PSEG, VTE Programme Board, Medication Safety Officers (MSO) Network, MSO presentations, NHS England Patient Safety Steering group.

Other

Reference 1: National Institute for Health and Clinical Excellence. Venous thromboembolism reducing the risk, Reducing the risk of venous thromboembolism (deep vein thrombosis and pulmonary embolism) in patients admitted to hospital. NICE clinical guideline 92. issued: January 2010; (Jan):p12 www.nice.org.uk/cg92 (accessed 10th January 2015).

Reference 2: Medicines and Healthcare Products Regulatory Authority. Summary Produce Characteristic LMWH. www.mhra.gov.uk/Safetyinformation/Medicinesinformation/SPCandPILs/ (accessed 10th January 2015).