Title of Guideline (must include the word “Guideline” (not protocol, policy, procedure etc)) | Guideline for the Subcutaneous Administration of Low Molecular Weight Heparin (Enoxaparin)
---|---
Author: Contact Name and Job Title | Thromboprophylaxis committee. Original author: Maria Rodriguez, Deputy Ward Manager F19 no longer within NUH
Directorate & Speciality | DIAGNOSTICS & CLINICAL SUPPORT
Date of submission | January 2015
Explicit definition of patient group to which it applies (e.g. inclusion and exclusion criteria, diagnosis) | Medical and surgical patients suffering with or at risk of having a deep-vein thrombosis DVT and or a pulmonary embolism (PE). **All patients should be assessed for risk of bleeding before offering prescribed pharmacological VTE thromboprophylaxis (NICE 2010).**
Version | 2
If this version supersedes another clinical guideline please be explicit about which guideline it replaces including version number. | Version 1: Guideline for the Subcutaneous Administration of Low Molecular Weight Heparin (Enoxaparin)
Statement of the evidence base of the guideline – has the guideline been peer reviewed by colleagues? | 1,5 and 6
Evidence base: (1-6) | 
| 1 | NICE Guidance, Royal College Guideline, SIGN (please state which source). |
| 2a | meta analysis of randomised controlled trials |
| 2b | at least one randomised controlled trial |
| 3a | at least one well-designed controlled study without randomisation |
| 3b | at least one other type of well-designed quasi-experimental study |
| 4 | well-designed non-experimental descriptive studies (ie comparative / correlation and case studies) |
| 5 | expert committee reports or opinions and / or clinical experiences of respected authorities |
| 6 | recommended best practise based on the clinical experience of the guideline developer |
Consultation Process | Nursing Practice Guidelines Group, Matrons, Heamostasis and Thrombosis nurses. Thromboprophylaxis committee (no e-mail group). Clinical Leads, Ward/Department Sisters/Charge Nurses, specialist nurses, Infection Control
Ratified by: | Matron’s Forum
Date: | Feb 2015
Target audience | All registered nurses and allied health professionals
Review Date: (to be applied by the Integrated Governance Team) | A review date of 5 years will be applied by the Trust. Directorates can choose to apply a shorter review date, however this must be managed through Directorate Governance processes.
This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt contact a senior colleague or expert. Caution is advised when using guidelines after the review date.
Subcutaneous Administration of Low Molecular Weight
Heparin
(Enoxaparin)

INTRODUCTION

Enoxaparin is a low molecular weight heparin (LMWH) that is used in the prevention and treatment of medical and surgical patients suffering with or at risk of having a deep-vein thrombosis (DVT) and/or a pulmonary embolism (PE). Thrombus formation can cause death, disability and chronic ill health. All patients should be assessed for risk of venous thromboembolism (VTE) on admission.

All patients should be assessed for risk of bleeding before offering prescribed pharmacological VTE thromboprophylaxis (NICE 2010).

This guidance refers to the use of Clexane enoxaparin sodium, currently in use at NUH.

Best Practice

All adult medical inpatients will have a VTE risk assessment on admission to hospital Commissioning for Quality and Innovation (CQUIN) payment framework (Department of Health 2008). At NUH the completion of the VTE risk assessment is carried out by medical staff.

PROCEDURE FOR ADMINISTERING SUBCUTANEOUS LOW MOLECULAR WEIGHT HEPARIN

EQUIPMENT

Patient prescription chart with prescribed enoxaparin
Enoxaparin syringe of appropriate dose
Gauze and water to clean skin if soiled
Sharps bin
Gloves
Apron
Refer to general principles for all guidelines.

**PREPARATION OF EQUIPMENT – NURSING RESPONSIBILITIES**

<table>
<thead>
<tr>
<th>ACTION</th>
<th>RATIONALE</th>
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<tbody>
<tr>
<td>1 <strong>Assist the patient if required to sit comfortably in bed or chair</strong></td>
<td>To access the abdominal area</td>
</tr>
<tr>
<td>2 Prepare the injection in a designated clean area of the clinical area/department.</td>
<td>To reduce the risk of contaminating the equipment or medication used.</td>
</tr>
<tr>
<td>3 Check the medication in accordance with the local Drug Code of Practice.</td>
<td>To reduce the risk of error in administration.</td>
</tr>
<tr>
<td>4 Check that the packaging of all equipment is intact.</td>
<td>To reduce the risk of cross infection.</td>
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<tr>
<td>5 Perform hand decontamination,</td>
<td></td>
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<tr>
<td>6 If dose contained in the syringe has to be adjusted to match prescribed dose, discard excess enoxaparin holding needle facing downwards</td>
<td>To minimise risk of bruising by preventing the drug coating the needle and penetrating the skin tissue as the needle pierces the skin, (Balci and Celebioglu 2008, Chan 2001) By holding the needle downwards the air bubble within the solution remains. Removal of the air bubble prior to administration could alter the dose of the drug (Sanofi Aventis package leaflet, information for user 2008)</td>
</tr>
<tr>
<td>7 If dose contained in the syringe matches the prescribed dose, do not purge the syringe to remove the air bubble</td>
<td>Removal of the air bubble prior to administration could alter the dose of the drug (Sanofi Aventis package leaflet, information for user 2008)</td>
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<tr>
<td>9</td>
<td>Enoxaparin should only be administered in the abdominal wall.</td>
</tr>
<tr>
<td>10</td>
<td>Site selection should be alternated from right to left.</td>
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<tr>
<td>11</td>
<td>Raise a skin fold between forefingers and thumb and hold the skin throughout the duration of the injection</td>
</tr>
<tr>
<td>12</td>
<td>Insert the needle vertically at 90°</td>
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<tbody>
<tr>
<td>14</td>
<td>Administer the injection slowly over a <em>minimum</em> of 10 seconds</td>
<td>Administer the injection slowly over a <em>minimum</em> of 10 seconds. The slower the process the more time is allowed for the absorption of the injectate and less pain is experienced (Wooldridge and Jackson 1988, Hall 2004, Smith and Duell 1997, Balci and Celebioglu 2008). Enoxaparin given over 30 seconds can reduce pain further and minimise the risk of bruise formation (Chan 2001, Zaybak and Korshid 2008).</td>
</tr>
<tr>
<td>15</td>
<td>Remove the needle maintaining a 90° angle.</td>
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</tr>
<tr>
<td>16</td>
<td>Once the needle is removed, if required <em>gentle</em> pressure can be applied to the site with clean gauze. Advise the patient not to rub the injection site</td>
<td>Once the needle is removed, if required <em>gentle</em> pressure can be applied to the site with clean gauze. Advise the patient not to rub the injection site. To avoid traumatizing the tissue surrounding the injection site, minimising risk of bruising and therefore preserving tissue for future injections (Chamberlain 1980, Aguilera Manrique 2002, Gomez et.al 2005, Balci and Celebioglu 2008).</td>
</tr>
<tr>
<td>17</td>
<td>Dispose of equipment according to hospital policy</td>
<td>Dispose of equipment according to hospital policy.</td>
</tr>
</tbody>
</table>
REFERENCES:


National Institute of Clinical Excellence (2010) VTE Prevention Quality


Sanofi Aventis - www.sanofi-aventis.com One Onslow Street. Guildford. Surrey. GU1 4YS.


BIBLIOGRAPHY:


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