Procedure for Conservative Sharp Debridement of Wounds

Applicable to Specialist Nurse(s) Tissue Viability only

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<th>Comments</th>
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<tbody>
<tr>
<td>Nov 13</td>
<td>All</td>
<td>Minor amendments to job titles</td>
<td>Lead Nurse Tissue Viability</td>
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Ratified by: Senior Nursing & Midwifery Leadership Committee

Date Ratified: January 2012

Date Issued: January 2012

Review Date: November 2016
1. INTRODUCTION

Dead tissue in the form of slough and necrosis can, if present in a wound, delay healing and promote infection. Debridement describes any method by which such materials are removed and as a consequence the potential to achieve wound healing enhanced. Debridement can be achieved either through the use of wound care products or by conservative sharp debridement. This procedure will focus on the removal of devitalised tissue by Conservative Sharp Debridement (CSD)

This procedure will only be undertaken by Senior Specialist Nurses in Tissue Viability who have successfully completed a validated educational programme in wound debridement at a minimum of degree level including assessment of competency in practice. Conservative sharp debridement is an extended role for the specialist nurse.

Procedure Statement

“Debridement is an accepted principle of good wound care, especially when debris is acting as a focus for infection”

The purpose of debridement is to:

- Determine the extent of the wound and identify any undermining
- Remove non-viable tissue
- Reduce the bacterial load and minimise risk of local and systemic infection
- Allow wound drainage
- Reduce odour
- Promote Healing

Debridement is complete when 100% of the wound bed consists of healthy granulation tissue

When clinically indicated conservative sharp debridement (CSD) provides a fast and effective method of wound debridement, however, nurses should be aware of the other methods of debridement available. The nurse must have the knowledge and ability to select the appropriate method for each wound and apply it correctly. Often a combination of methods will be required to achieve rapid safe debridement. CSD may form part of an on-going program of debridement.
Methods of Debridement

The main methods of debridement are:

- Autolytic
- Chemical
- Enzymatic
- Mechanical
- Sharp
- Biosurgery
- Hydosurgery

Scope of Procedure

Educational requirements:

Nurses carrying out this procedure will:

- Be employed in the role of Senior Specialist Nurse Tissue Viability or equivalent
- Have completed an education programme in wound debridement, to include conservative sharp debridement, recognised by a University and at a minimum of level 6

All nurses wishing to undertake this technique must:

- Do so in line with Nursing and Midwifery Code of Professional Conduct (NMC, 2008)
- Be anatomically aware of the underlying structures within the area to be debrided (Appendix 1)
- Stop if they become uncomfortable, uneasy or uncertain at any time during the procedure
- Have approval from their employers to perform the extended role
- Do so as part of a treatment plan agreed with the multi-disciplinary team managing the patients care
- Be aware of local policies and guidelines related to wound management (e.g. Infection Control/ Moving and Handling)

Equipment required

- Scalpel with size 10 or 15 blade
- Sharp sterile scissors with a curved blade
- Sterile metal toothed forceps
- Sterile dressing pack
- Haemostatic dressing
- Camera/access to medical photographer
- Sharps bin and container for safe disposal of clinical waste
- Post procedural wound dressing
Assessment

Assessment of the patient prior to conservative sharp debridement

All patients with wounds considered suitable for sharp debridement should receive a holistic assessment and be made aware of the different options/advantages and disadvantages of the various methods of debridement. The nurse should examine the needs of the patient and the wound and subsequently:

- Define treatment objectives
- Examine available treatment options and score likely effectiveness in terms of treatment outcomes
- Evaluate potential risks and benefits to patient and wound of the chosen treatment
- Determine if wound is prepared for CSD or requires adjunctive treatment such as antibiotic cover

Contraindications for conservative sharp debridement

- Wounds on ischaemic digits
- Patients with blood clotting disorders
- Wounds that are fungating or malignant wounds
- Wounds on the foot (excluding heel region)
- Wounds on the hands and face
- Neonates and paediatrics

Nurses should not undertake sharp debridement of wounds that are near the following structures:
- Arterial structures
- Vascular grafts
- Prosthesis
- Dialysis fistula

When referral should be made to the appropriate Consultant Surgeon.

Cautions for conservative sharp debridement

- Lower limb wounds in the presence of ischaemia*
- Patients on long term anti-coagulant therapy e.g. Warfarin, Aspirin
- Patients on short term anti-coagulant therapy e.g subcutaneous Enoxoparin
- Wounds on heels**
- Wounds on the Achilles tendon area**
- CSD in the presence of clinical infection may require systemic antibiotic cover

* decisions with regard to whether or not the debridement of ischaemic lower limbs is appropriate should ideally be made in conjunction with a Consultant Vascular Surgeon

** referral should be made to the podiatrist for joint assessment and management, if appropriate

The nurse must be aware of the availability of medical support in the event of unforeseen or unexpected problems during CSD.
Complications

Possible complications

If any complications arise i.e. pain, damage to underlying structures and/or excessive bleeding the procedure should be stopped immediately. The patient should be reassured and appropriate action taken which may involve seeking medical assistance. The complications and subsequent action should be documented in the patient’s health records, other health professionals caring for the patients should be informed and an incident form completed if necessary.

Recommended Procedure

Prior to CSD

<table>
<thead>
<tr>
<th>Action</th>
<th>Rationale</th>
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<tbody>
<tr>
<td>Complete and document and wound assessment</td>
<td>To provide a baseline of wound status prior to CSD and check safety issue before proceeding</td>
</tr>
<tr>
<td>Record wound size shape, depth, position and site</td>
<td></td>
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<tr>
<td>involve medical photography for wound photograph or photograph wound adhering to Trust policy and guidelines on photographing patients</td>
<td></td>
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<tr>
<td>Estimate the depth of the necrosis and assess the skin around the margins</td>
<td></td>
</tr>
<tr>
<td>Note proximity to structures or anatomical features e.g. grafts, prosthesis, bone, tendon etc</td>
<td></td>
</tr>
<tr>
<td>Vascular assessment (ABPI) to be completed if the area to be debrided is on the lower leg or foot</td>
<td>To determine the vascular status and check the appropriateness of CSD</td>
</tr>
<tr>
<td>Explain CSD procedure to the patient and ensure informed consent has been obtained. Consent may be verbal (documented fully in the Health Records and witnessed by another Health care professional) or written using consent form 1. If the patient has cognitive impairment then consent form 4 should be used</td>
<td>To inform the patient of the procedure, other options available and ensure informed consent</td>
</tr>
<tr>
<td>Agree a time limit for the procedure</td>
<td></td>
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<tr>
<td>Consider the need for: Administration of analgesia (systemic, topical or local)</td>
<td>As only dead tissue will be incised, the procedure should not increase pain. However additional analgesia may be required if viable tissue is unintentionally incised or if manipulation of dead tissue pulls on underlying viable tissue</td>
</tr>
<tr>
<td>Antibiotic cover if clinical signs of infection are present</td>
<td>To treat underlying tissue infection</td>
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Prepare the environment e.g. lighting, bed height. To ensure good visibility of the wound bed
Ensure patient is comfortable and appropriately covered To ensure privacy and dignity

During CSD

<table>
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<tr>
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<tr>
<td>Ensure that:</td>
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<tr>
<td>The patient is comfortable and in a position where the wound can be accessed and viewed easily.</td>
<td>To allow access to area for debridement</td>
</tr>
<tr>
<td>The nurse carrying out this procedure is in an appropriate and comfortable position.</td>
<td>Provide a safe working environment for the practitioner</td>
</tr>
<tr>
<td>Prepare a sterile field and ensure all equipment and resources are in place</td>
<td>To allow safe and easy access to resources during procedure</td>
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<tr>
<td>Lift the necrotic tissue with suitable grasping forceps and cut it carefully with a scalpel or curved tissue scissors. The angle of the scalpel or scissors should be parallel to or angled away from the wound bed. Necrotic tissue should be removed in layers.</td>
<td>To minimise pain and damage to healthy tissue.</td>
</tr>
<tr>
<td>Send a specimen of the debrided tissue for culture and sensitivity if clinical signs of infection present or clinically indicated</td>
<td>To determine organisms present and appropriate antibiotic treatment</td>
</tr>
<tr>
<td>The nurse should stop the procedure if either they or the patient becomes uncomfortable, uneasy or uncertain at any time during the procedure.</td>
<td>To ensure that the nurse does not exceed his/her level of competence</td>
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After CSD

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<tr>
<th>Action</th>
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<tr>
<td>Reassess the wound bed including photographing and document.</td>
<td>To establish and record extent of debridement</td>
</tr>
<tr>
<td>Redress according to Trust Wound Management Formulary</td>
<td>To provide the optimal environment for wound healing</td>
</tr>
<tr>
<td>Dispose of equipment, sharps and debrided tissue as per Trust Clinical Waste Policy</td>
<td>To prevent injury and cross infection</td>
</tr>
<tr>
<td>Document the outcome of the procedure in the patient’s clinical record</td>
<td>To accurately record the process and outcome of CSD</td>
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To ensure on going professional record and audit of CSD the Senior Specialist Nurse Tissue Viability must maintain a log of all patients who receive CSD.
REFERENCES


| Volume 9 | First Ratified January 2012 | Reviewed November 2013 | Issue 2 | Page 7 of 9 |

**Appendix 1. Tissue types encountered during conservative sharp wound debridement**

<table>
<thead>
<tr>
<th>Tissue</th>
<th>Description</th>
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<tbody>
<tr>
<td>Subcutaneous</td>
<td>Mostly yellow fat: there are some blood vessels but generally there is poor vascularity</td>
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<tr>
<td>Fascia</td>
<td>Shiny gleaming white. It is “tough” covering the muscles. Infection can spread along the plane (necrotising fasciitis)</td>
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<tr>
<td>Muscle</td>
<td>Dull red in colour, highly vascular and tears easily. Protects bones, joints, nerves and vessels</td>
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<tr>
<td>Bone</td>
<td>Hard, bright and white. Dessicates rapidly if exposed and turns yellow</td>
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<tr>
<td>Cartilage</td>
<td>Connective tissue with poor vascularity. Covers the bone at the joint</td>
</tr>
<tr>
<td>Ligaments type 1</td>
<td>White, fibrous, inelastic</td>
</tr>
<tr>
<td>Ligaments type 2</td>
<td>Yellow elastic tissue</td>
</tr>
<tr>
<td>Tendons</td>
<td>Strong, gleaming white, shiny elastic fibrous tissue. Attach muscle to bone, poor vascularity</td>
</tr>
<tr>
<td>Dead tissue</td>
<td>Dead tissue presents in a variety of forms</td>
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<tr>
<td>Necrotic Tissue</td>
<td>Necrotic tissue varies in appearance dependent on moisture content. When dry necrotic tissue presents as hard, black eschar (leather like). When moisture content rises the necrotic tissue changes to brown, then yellow before breaking down into slough, which can be yellow/grey fibrous tissue with a gelatinous surface attached to the wound bed (NICE, 2005)</td>
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*Adapted from Edwards, 2000*