<table>
<thead>
<tr>
<th>NAME OF DOCUMENT</th>
<th>Wound - Management of Hypergranulation Tissue</th>
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<tr>
<td>KEY TERMS</td>
<td>Hypergranulation, stoma, granulomas, wound, gastrostomy</td>
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<tr>
<td>SUMMARY</td>
<td>To assist clinicians to practice safely within scope of practice to manage hypergranulation tissue and promote wound healing.</td>
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1. POLICY STATEMENT

This procedure will assist clinicians working in hospital and community settings to appropriately manage hypergranulation tissue within their scope of practice.

A thorough wound assessment is essential to determine the cause of the hypergranulation and to exclude incorrect diagnosis e.g. scar tissue (hypertrophic scar or malignancy).

This procedure will improve patient outcomes for people with wounds through the appropriate management of hypergranulation tissue, on suitable clients, using appropriate methods. However, as there is low level evidence related to the prevention and management of hypergranulation tissue, clinical judgement must be exercised in the management of each patient.

2. BACKGROUND

Hypergranulation tissue is one of the most common complications of wound healing\(^1,2,3\). Healthy granulation tissue appears red, moist and shiny.

Aims of management:
- Reduce microbial load
- Reduce excess exudate
- Reduce inflammation
- Debridement of excess tissue.

The table below outlines locations at which hypergranulation tissue occurs, and which methods are appropriate. Refer to Appendix A for management flowchart.

<table>
<thead>
<tr>
<th>Treatment Options</th>
<th>Treatment Objective</th>
<th>Appropriate locations</th>
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<tbody>
<tr>
<td>Application of foam dressing</td>
<td>To flatten and absorb moisture</td>
<td>Wound</td>
</tr>
<tr>
<td>Change from an occlusive to non-occlusive dressing</td>
<td>To reduce moisture(^2)</td>
<td>Wound</td>
</tr>
<tr>
<td>Antimicrobials</td>
<td>To reduce bacteria</td>
<td>Wound, gastrostomy</td>
</tr>
<tr>
<td>Use of fixative device</td>
<td>To reduce movement and stimulation of new granulation tissue(^2)</td>
<td>Gastrostomy, SPC</td>
</tr>
<tr>
<td>Topical corticosteroid</td>
<td>Reduces cell division and production of granulation tissue(^2)</td>
<td>Wound, gastrostomy, SPC</td>
</tr>
<tr>
<td>Silver foam</td>
<td>Antimicrobial and compression of tissue(^2)</td>
<td>Wound, gastrostomy</td>
</tr>
<tr>
<td>Silver nitrate stick</td>
<td>Used only if all else has been ineffective(^2)</td>
<td>Wound, gastrostomy, stomaco-lostomy, ileostomy, urostomy</td>
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<tr>
<td>Surgical excision</td>
<td>Removal of hypergranulation tissue. Undertaken in theatres as very last resort(^2)</td>
<td>All</td>
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2.1 Definitions:

Hypergranulation tissue: Formation of granulation tissue without migration of epithelial cells across the wound bed. This results in the granular tissue being higher than the surrounding tissue which is friable and irregular\(^4\) also known as Overgranulation tissue or Proud flesh.
3. RESPONSIBILITIES

3.1 Employees will:
Ensure that they work within their scope of practice and attend relevant education related to this procedure.

3.2 Line Managers will:
Ensure all clinical staff are given the opportunity to attend District wound management education and that all clinicians work within this procedure and have appropriate resource and stock items to implement the recommendations within this procedure.

3.3 Medical staff will:
Ensure that they work within their scope of practice and attend relevant education related to this procedure.

4. PROCEDURE

4.1 A thorough wound assessment is essential to determine the cause of the hypergranulation and exclude incorrect diagnoses e.g. scar tissue (hypertrophic scar) or malignancy. If there is any suspicion that the tissue is of a malignant nature, the patient should be referred for biopsy. Indications of malignancy include:
- The presence of hypergranulation over many months
- A ‘cauliflower-like’ appearance
- The area being hard to touch
- The tissue grows beyond the wound margins
- When there is no response to any of the above treatments

4.2 Silver nitrate – not recommended for first line therapy
**Precaution do not use on areas of tissues greater than one centimetre**
For Silver Nitrate application - the following steps are completed once a day for five days:
- Put a layer of white paraffin or petroleum jelly (Vaseline™) on the healthy skin around the granulation tissue before using the silver nitrate stick – the silver nitrate will injure healthy skin.
- Moisten the tip of the silver nitrate stick with sterile water.
- Touch the silver nitrate stick onto the hypergranulation tissue for 5 seconds. It will turn grey and then black
- Redress with patients usual dressing product
- Educate patient if pain persists after the dressing concludes to cool wound area with water and to seek medical advice
- If there is no improvement in five to seven days consult Medical Office or wound care expert

**Note:** areas using silver nitrate, must have the Material Safety Data Sheet (MSDS) available and adhere to disposal recommendations.

4.3 Absorption of exudate:
- Foam dressings**
- Hydrofibre dressings**
- Calcium alginate dressings**
- Super absorbent secondary dressings** e.g. Biatain super™, Zetuvit™, Exudry™, Vacutex™
- Hypertonic saline solutions e.g. Mesalt™ and Sodium Chloride dressing
DO NOT USE hydrogel or hydrocolloid dressings as they may increase the growth of hypergranulation tissue and may not absorb adequate exudate in hypergranulating wounds.

4.4 Change from an occlusive to non-occlusive dressing

4.5 Topical corticosteroid

Note: Before use always discuss first with medical officer and ensure a prescription/authority letter is available prior to administration

- Apply sparingly to hypergranulation tissue daily
- Avoid contact with health tissue

4.6 Remove the Hypergranulation tissue.

- Conservative sharp debridement (qualified staff only to use this method)
- Silver nitrate preparations

4.7 Reduce the microbial load of the wound: use of antimicrobials

- Medical honey (to be initiated by a Wound CNC)
- Silver containing dressings/products

4.8 Reduce inflammation

- Medical honey (to be initiated by a Wound CNC)
- Silver containing dressings/products
- Topical corticosteroid preparations
- Products/solutions containing Polyhexamethylene Biguanide (PHMB) (e.g. Prontosan™, Kerlex™, AMD™)

4.9 Direct pressure to the wound bed

- Apply a thick folded gauze pad over the wound dressing to increase pressure directly over the wound bed to discourage hypergranulation tissue developing.

Note: NEVER apply/make a tourniquet when doing this.

4.10 Remove or treat cause of the friction

Increased inflammation can also be caused by an irritant, review the wound for any stimulant causing this e.g. friction from a Percutaneous Endoscopic Gastrostomy (PEG) tube at the exit site on the skin. This happens if the PEG tube is too small or the flange is loose allowing the tube to rub the exit site. The exit site wound should be reviewed and the problem rectified.

Note: Any dressing product should only be used with a full understanding of the product, its use and any contra-indications.

5. DOCUMENTATION

- Wound assessment and management plan (form number S0056)
- Any additional comments are to be recorded in the patient’s / client’s health care record.
- CHIME wound care templates/clinical pathways
- Transfer documentation e.g. from community to hospital or vice versa
- Discharge letters should include wound assessment and management plan information
- National in-patient medication chart (NIPMC)
- Medical authority letter
6. REFERENCES

6.1 External References


6.2 Internal References

- Wound - Assessment and Management procedure
- Wound - Antiseptic dressing policy
- Wound - Digital wound photography procedure
- Wound - Managing pain at dressing change
- Wound - Compression policy
- Wound - Negative Pressure Wound Therapy policy

SESLHD Infection Control Manual

- Hand Hygiene and Hand Care
- Hand and wrist jewellery, nail polish and fingernail enhancements
- Sharps Management
- Management of Multi-Resistant Organisms (MRO's)
- Transmission Based (Additional) Precautions

7. REVISION AND APPROVAL HISTORY

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision No.</th>
<th>Author and Approval</th>
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<tbody>
<tr>
<td>May 2015</td>
<td>1</td>
<td>SESLHD and ISLHD wound committee</td>
</tr>
<tr>
<td>July 2015</td>
<td>2</td>
<td>Endorsed by SESLHD Wound Committee. Changes made as suggested by the Drug and Quality Use of Medicines Committee</td>
</tr>
<tr>
<td>November 2015</td>
<td>2</td>
<td>Endorsed by SESLHD Clinical and Quality Council</td>
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Appendix A  Management of Hypergranulation Flow Chart\textsuperscript{6,7}

Patient presents with hypergranulation

Is malignancy present?

Yes

Refer to medical officer e.g. Dermatology or Plastic surgery or General surgery

Yes

Reduce bacterial load use antimicrobial dressing product review in 14 days plus systemic antibiotics if necessary

Yes

Is the area infected?

No

Reduce friction Assess and ensure any tubing (PEG/SPC) is well secured

Is the cause moisture?

Yes

Reduce excess exudate use more absorbent dressings, e.g. foam, and applying direct pressure over the wound bed

No

Is the cause friction?

Yes

Reduce inflammation use dressing products which have an osmotic action to draw fluid from the tissue i.e. hypertonic saline or medical honey dressings or topical corticosteroid creams

No

Is the area infected?

No

Is the cause moisture?

Yes

Reduce inflammation use dressing products which have an osmotic action to draw fluid from the tissue i.e. hypertonic saline or medical honey dressings or topical corticosteroid creams

No

Is the cause friction?

Yes

Remove hypergranulation conservative sharp debridement or silver nitrate

No

Over granulation managed?

Yes

No further treatment required

No