Skin Tears Update
Ageing and Skin Health
Residential Aged Care Seminar

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Topics Covered

• Introduction to the latest evidence on skin tear prevention, assessment and management

• Putting it all together with case studies
Definition
(International Skin Tear Advisory Panel : ISTAP)

“A skin tear is a wound caused by shear, friction and/or blunt force resulting in the separation of skin layers. A skin tear can be partial thickness (separation of the epidermis from the dermis) or full thickness (separation of both the epidermis and the dermis from the underlying structures)”
Alternative terms

• Partial thickness wounds
• Abrasions
• Loss of epidermis
• Skin stripping
• Skin flaps
• Full-thickness wounds
• Linear lacerations
• Trauma
• Skin injury

• Shear
• Open wound
• Tears
• Slits
• Peels
• Splits
• Tape stripping
• Opening
• Scratch
• ............................................
What is a chronic wound

• A wound that does not heal along an expected course

• Skin Tears can quickly become chronic and COMPLEX

• They can be exquisitely and agonisingly painful, distressing and life-threatening
Prevalence of Skin Tears in the Older Person

• Reported to be similar to pressure injury prevalence rates or at least the second most prevalent wound.

Validated Skin Tear Classifications

**STAR Skin Tear Classification System**

*Silver Chain Nursing Association and Midwifery. Curtin University of Technology. (2010)*

**ISTAP Skin Tear Classification System**

*International Skin Tear Advisory Panel. (2013)*

- **Type 1: No Skin Loss**
  - Linear or flap tear that can be repositioned to cover the wound bed

- **Type 2: Partial Flap Loss**
  - Partial flap loss that cannot be repositioned to cover the wound bed

- **Type 3: Total Flap Loss**
  - Total flap loss exposing entire wound bed
Contents of the ISTAP Toolkit

- Skin Tear Risk Assessment Pathway
- Quick Reference Guide: ISTAP Risk Reduction Program and Rationale
- Skin Tear Decision Algorithm
- Pathway to Assessment / Treatment of Skin Tears
- ISTAP Skin Tear Classification System
- Skin Tear Prevalence Study Data Collection Sheet
- Medications that can affect the skin
- Drugs associated with risk of falls
- Skin tear product selection guide

http://www.skintears.org/
Skin tear risk assessment pathway*

GENERAL HEALTH
- chronic/critical disease
- polypharmacy
- impairment: cognitive, sensory, visual, auditory, nutritional

MOBILITY
- history of falls
- impaired mobility
- dependent activities of daily living (ADLs)
- mechanical trauma

SKIN
- extremes of age
- fragile skin
- previous skin tears

No risk factors

At risk: 1 or more of the factors listed above

High risk: visual impairment, impaired mobility, dependent ADLs, extremes of age, previous skin tears

Reassess with change in status

Implement Skin Tear Risk Reduction Program

See Quick Reference Guide and/or ISTAP Risk Reduction Program

*Level of evidence: C
Quick Reference Guide: ISTAP Risk Reduction Program

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Individual</th>
<th>Care giver/provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Health</td>
<td>• Educate patient on skin tear prevention and promote active involvement in treatment decisions (if cognitive function not impaired)</td>
<td>• Safe patient environment</td>
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<tr>
<td></td>
<td>• Optimise nutrition and hydration</td>
<td>• Educate client +/ circle of care/caregivers</td>
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<tr>
<td></td>
<td>• Encourage active involvement if physical function not impaired</td>
<td>• Protect from self-harm</td>
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<tr>
<td></td>
<td>• Appropriate selection and use of assistive devices</td>
<td>• Dietary consult if indicated</td>
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<td></td>
<td></td>
<td>• Extra caution with extremes of BMI (&lt;20 or &gt;30)</td>
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<td></td>
<td></td>
<td>• Review polypharmacy for medications reduction/optimisation</td>
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<tr>
<td></td>
<td></td>
<td>• Daily skin assessment and monitor for skin tears</td>
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<tr>
<td></td>
<td></td>
<td>• Ensure safe patient handling techniques/equipment and environment (trauma, Activities of Daily Living (ADLs), self-injury)</td>
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<tr>
<td></td>
<td></td>
<td>• Proper transferring/repositioning</td>
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<tr>
<td></td>
<td></td>
<td>• Initiate fall prevention program</td>
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<tr>
<td></td>
<td></td>
<td>• Remove clutter</td>
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<td></td>
<td></td>
<td>• Ensure proper lighting</td>
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<tr>
<td></td>
<td></td>
<td>• Pad equipment/furniture (bed rails, wheelchair etc.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Avoid sharp finger nails/jewellery when having patient contact</td>
</tr>
<tr>
<td>Skin</td>
<td>• Awareness of medication induced skin fragility (e.g., topical and systemic steroids)</td>
<td>• Individualise skin hygiene (warm, tepid not hot water, soapless or pH-neutral cleaners, moisturise skin)</td>
</tr>
<tr>
<td></td>
<td>• Wear protective clothing (skin guards, long sleeves etc.)</td>
<td>• Avoid strong adhesives, dressings, tapes</td>
</tr>
<tr>
<td></td>
<td>• Moisturise skin (lubrication and hydration)</td>
<td>• Avoid sharp fingernails/jewellery with patient contact</td>
</tr>
<tr>
<td></td>
<td>• Keep fingernails short</td>
<td></td>
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</tbody>
</table>

Health care setting

- Implement comprehensive Skin Tear Reduction Program
- Include skin tears in audit programs
- Utilise validated classification system
- Develop consultative team (wound care / dietary specialists, rehab / pharmacists)
Skin Tear Decision Algorithm ©

1. CONTROL BLEEDING
2. ASSESS
3. CLEANSE
4. APPROXIMATE WOUND EDGES
   - CLASSIFY (Measure and Document)

 GOALS OF TREATMENT
- TREAT THE CAUSE
- IMPLEMENT PREVENTION PROTOCOL
- MOIST WOUND HEALING
- AVOID TRAUMA
- PROTECT PERIWOUND SKIN
- MANAGE EXUDATE
- AVOID INFECTION
- PAIN CONTROL

 TREATMENT OPTIONS IN ACCORDANCE WITH LOCAL WOUND CONDITIONS

- **TYPE 1: NO SKIN LOSS**
  - Linear or flap tear that can be repositioned to cover the wound bed

- **TYPE 2: PARTIAL FLAP LOSS**
  - Partial flop loss that cannot be repositioned to cover the wound bed

- **TYPE 3: TOTAL FLAP LOSS**
  - Total flap loss exposing entire wound bed
ISTAP Skin Tear Classification System ©

Type 1: No Skin Loss
- Linear or flap tear that can be repositioned to cover the wound bed

Type 2: Partial Flap Loss
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Pathway to Assessment / Treatment of Skin Tears ©

Person with a Skin Tear

Treat the Cause
GENERAL HEALTH
Cognitive, sensory, visual, auditory, nutrition, chronic/critical disease, polypharmacy

AMBULATION
History of falls, impaired mobility, activities of daily living (ADLs)

SKIN
Age, mechanical trauma, fragile skin, previous tears

Local Wound Care
Atraumatic (dressing) removal, cleanse, control bleeding, approximate wound edges, assess & classify according to ISTAP Classification System

Patient-centered Concerns
ADLs
Pain control
Educate client & circle of care

Debridement
Nonviable tissue only
Avoid sutures/staples

Infection/Inflammation
Topical antimicrobials for local infection
Systemic antibiotics for deep tissue infection
Consider tetanus immunization

Moisture Balance
Periwound protection (eg, film-forming liquid acrylate)
Wound: Nonadherent or low tack + facilitate moisture balance

Nonadvancing Edge
Re-evaluate, Consider active therapy

© ISTAP 2013

Adapted from: Sibbald et al modified from: LeBlanc, Christensen, Oststead, Keas, 2008
Why does this person have a Skin Tear?

- When a Skin Tear is reported, the cause is not always known or documented
- WHY?
Medications that can affect the skin ©

Various types of cutaneous or inflammatory interactions/reactions may occur with the use of the following\textsuperscript{14,15}

- antibacterials
- antihypertensives
- analgesics
- tricyclic antidepressants
- antihistamines
- antineoplastic agents
- antipsychotic drugs
- diuretics
- hypoglycemic agents
- nonsteroidal anti-inflammatory agents
- oral contraceptives
- sunscreens
- steroids
# Drugs associated with HIGH risk of falls ©

<table>
<thead>
<tr>
<th>Drug Type</th>
<th>Advice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antidepressants</strong></td>
<td>Avoid tricyclic antidepressants especially. Tricyclic Antidepressives (TCAs) with high anti-muscarinic activity. Selective Serotonin Re-uptake Inhibitors (SSRIs) are associated with a reduced incidence of side effects in the elderly.</td>
</tr>
<tr>
<td><strong>Antipsychotics</strong></td>
<td>Risk of hypotension is a dose-related effect reduced by the ‘start low go slow approach.’ Attempted withdrawal MUST always be gradual to avoid precipitation of withdrawal symptoms, e.g. rebound agitation etc.</td>
</tr>
<tr>
<td><strong>Anti-muscarinic drugs (Anticholinergics)</strong></td>
<td>Anti-muscarinic drugs are used in treatment of urinary incontinence and in Parkinson’s disease. Oxybutynin may cause acute confusional states in the elderly especially those with pre-existing cognitive impairment.</td>
</tr>
<tr>
<td><strong>Benzodiazepines &amp; Hypnotics</strong></td>
<td>Avoid long acting benzodiazepines</td>
</tr>
<tr>
<td><strong>Dopaminergic drugs used in Parkinson’s disease</strong></td>
<td>Sudden excessive daytime sleepiness can occur with Levodopa and other dopamine receptor agonists. Careful dose titration is particularly important in initiation of treatment because of additional risk of inducing confusion. As the patient ages, maintenance doses may need to be reduced.</td>
</tr>
</tbody>
</table>
Drugs associated with MODERATE risk of falls

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-epileptics</td>
<td>Incidence of dizziness, drowsiness and blurred vision are dose-related side effects observed with Carbamazepine but may be reduced by altering timing or choice of formulation. Phenytoin side effects such as dizziness and blurred vision may be signs of drug-related toxicity.</td>
</tr>
<tr>
<td>Anti-histamines</td>
<td>Somnolence may affect up to 40% of patients with older antihistamines. The newer antihistamines cause less sedation and psychomotor impairment.</td>
</tr>
<tr>
<td>Beta-blockers</td>
<td>Dizziness can occur and may be due to postural hypotension it can affect up to 10% of patients.</td>
</tr>
<tr>
<td>Diuretics</td>
<td>Postural hypotension, dizziness and nocturia are the most frequent problems seen in the elderly. Diuretics should not be prescribed for long-term use in the treatment of gravitational oedema.</td>
</tr>
<tr>
<td>Opiate analgesics</td>
<td>Drowsiness and sedation are common with initiation of treatment but tolerance to these side effects is usually seen within two weeks of continuous treatment.</td>
</tr>
</tbody>
</table>

ACE inhibitors/Angiotensin II antagonists

Risk of hypotension is potentiated by concomitant diuretic use. Incidence of dizziness varies from 4–12% of patients but affects twice as many patients with heart failure than hypertension.

Anti-arrhythmics

Dizziness and drowsiness are possible signs of Digoxin toxicity — risks of toxicity are greater in renal impairment or in the presence of hypokalaemia. Flecaïnide has a high risk for drug interactions and can also cause dizziness.
Assessment: Is this wound healable?

- Degree of blood supply to limb and flap?
- Degree of tissue loss?
- Can the edges be approximated?
- Clean or dirty wound?
- Bleeding?
- Infected?
- CHRONIC OEDEMA (SWELLING) IS THE ENEMY!!
<table>
<thead>
<tr>
<th>Product Categories</th>
<th>Indications</th>
<th>Skin Tear Type</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonadherent mesh dressings (eg, lipidocolloid mesh, impregnated gauze mesh, silicone mesh, petrolatum)</td>
<td>Dry or exudative wound</td>
<td>1, 2, 3</td>
<td>Maintains moisture balance for multiple levels of wound exudate, atraumatic removal, may need secondary cover dressing</td>
</tr>
<tr>
<td>Foam dressing</td>
<td>Moderate exudate, longer wear time (2–7 days depending on exudate levels)</td>
<td>2, 3</td>
<td>Caution with adhesive border foams, use nonadhesive versions when possible to avoid periwound trauma</td>
</tr>
<tr>
<td>Hydrogels</td>
<td>Donates moisture for dry wounds</td>
<td>2, 3</td>
<td>Caution: may result in periwound maceration if wound is exudative, for autolytic debridement in wounds with low exudate, secondary cover dressing required</td>
</tr>
<tr>
<td>2-Octyl cyanoacrylate topical bandage (skin glue)</td>
<td>To approximate wound edges</td>
<td>1</td>
<td>Use in a similar fashion as sutures within the first 24 h after injury, relatively expensive, medical directive/protocol may be required</td>
</tr>
<tr>
<td>Calcium alginites</td>
<td>Moderate to heavy exudate hemostatic</td>
<td>1, 2, 3</td>
<td>May dry out wound bed if inadequate exudate, secondary cover dressing required</td>
</tr>
<tr>
<td>Hydrofibre</td>
<td>Moderate to heavy exudate</td>
<td>2, 3</td>
<td>No hemostatic properties, may dry out wound bed if inadequate exudate, secondary cover dressing required</td>
</tr>
<tr>
<td>Acrylic dressing</td>
<td>Mild to moderate exudate without any evidence of bleeding, may remain in place for an extended period</td>
<td>1, 2, 3</td>
<td>Care on removal, should be used only as directed and left on for extended wear time</td>
</tr>
</tbody>
</table>

**Special Consideration for Infected Skin Tears**

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</tr>
</thead>
<tbody>
<tr>
<td>Methylene blue and gentian violet dressings</td>
<td>Effective broad-spectrum antimicrobial action, including antibiotic-resistant organisms</td>
<td>1, 2, 3</td>
<td>Nontraumatic to wound bed, use when local or deep tissue infection is suspected or confirmed, secondary dressing required</td>
</tr>
<tr>
<td>Ionic silver dressings</td>
<td>Effective broad-spectrum antimicrobial action, including antibiotic-resistant organisms</td>
<td>1, 2, 3</td>
<td>Should not be used indefinitely, contraindicated in patients with silver allergy, use when local or deep infection is suspected or confirmed, use nonadherent products whenever possible to minimize risk of further trauma</td>
</tr>
</tbody>
</table>

*This product list is not all-inclusive; there may be additional products applicable for the treatment of skin tears.*
AVOID

- Film dressings
- Hydrocolloids
- Skin closure strips
- SUTURES / STAPLES
Case Studies
Healing as expected Type 1
Slow Healing Type 1
A mixed bag!
Multiple skin tears on 1, 2 and 3 weeks duration (including left arm)
Bilateral Legs

Right Leg

Left Leg
Left Knee

Before Sharp Debridement

After Sharp Debridement
Left Wrist
Skin Tear post suturing
In Summary

- An international common language and approach now exists to enable consistency of care in skin tear prevention, assessment and management in the older person.

- The International Skin Tear Advisory Panel (ISTAP) provides a comprehensive suite of validated tools for the interdisciplinary team to guide the risk assessment, prevention, assessment and treatment of skin tears, even in the most complex situations.
References


References


• Strazzieri-Pulido, K., Peres, G., Campanili, T., & Santos, V. (2015), Skin tear prevalence and associated factors: a systematic review, *Revista da Escola de Enfermagem da USP, REEUSP*, (49)