Practical Wound Care for the Family Physician

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Faculty/Presenter Disclosures

- Faculty: Evelyn Williams, MD

- Relationships with commercial interests: none
- Potential for conflict(s) of interest: none
- No bias to mitigate.

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Learning Objectives

Participants will be able to

1. Classify and describe skin ulcers
2. Understand the principles of management of skin ulcers
3. Describe a management plan for wounds

The Objective Assessment

- Location
- Size
- Stage (depth by anatomical layer)
- Wound bed characteristics
- Exudate amount and odour
- Surrounding skin and margins
- Undermining
- Foot – pulses and edema

Staging
National Pressure Ulcer Advisory Panel
Suspected Deep Tissue Injury

Stage	Definition	Comments
Suspected deep tissue injury	• Purple or maroon localized area of discolored intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear • The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer, or cooler than adjacent tissue	• Deep tissue injury can be difficult to detect in individuals with dark skin tones • Evolution can include a thin blister over a dark wound bed • The wound can further evolve and become covered by thin eschar • Evolution can be rapid and expose additional layers of tissue, even with optimal treatment

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Stage 1 and 11

Stage	Definition	Comments
Stage I	• Intact skin with nonblanchable redness of a localized area usually over a bony prominence • Darkly pigmented skin may not have visible blanching; its color may differ from the surrounding area	• The area may be painful, firm, soft, and warmer or cooler than adjacent tissue • Stage I can be difficult to detect in individuals with dark skin tones
Stage II	• Partial-thickness loss of dermis presenting as a shallow open ulcer with a red-pink wound bed, without slough • Can also present as an intact or open/ruptured serum-filled blister	• Presents as a shiny or dry shallow ulcer without slough or bruising (the latter indicates suspected deep tissue injury) • This stage should not be used to describe skin tears, tape burns, perineal dermatitis, maceration, or excoriation

Stage III

Definition

- Full-thickness tissue loss
- Subcutaneous fat can be visible but bone, tendon, or muscle are not exposed
- Slough may be present but does not obscure the depth of tissue loss
- Can include undermining and tunneling

Comments

- Depth varies by anatomic location The bridge of the nose, ear, occiput, and malleolus do not have subcutaneous tissue, and Stage III ulcers can be shallow
- In contrast, areas of significant adiposity can develop extremely deep Stage III pressure ulcers Bone/tendon is not visible or directly palpable

Stage IV

Full-thickness tissue loss with exposed bone, tendon, or muscle

- Slough or eschar can be present on some parts of wound bed
- Often include undermining and tunneling

Documentation Template

- Create on paper or in your own EMR
- Use modified SOAP format

S: history and pain symptoms

O: objective skin parameters (size, stage, wound bed, margins, surrounding skin, exudate, etc.)

A: diagnosis (venous, arterial, diabetic, etc.)

P: treatment plan

Systemic

Local

Involvement of occupational therapy, nursing, nutrition.

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Diagnosis

- Is it a pressure ulcer OR
- Is it a venous, arterial, or diabetic ulcer?
- What are the underlying causes?
- What are the local factors (moisture, friction, shear, lack of mobility)?
- Is the wound infected?

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Management Plan

- Get the pressure off!
- Treat reversible underlying causes
- Address modifiable local factors
- Debride necrotic tissue
- Treat infection – systemic vs. topical treatment
- Manage moisture
- Manage pain

Aim for a Clean and Moist Wound Bed

Debride dead tissue with a scalpel or topical agent

Manage moisture – not too much, not too little

Topical Wound Care Order Set

- Specify treatment frequency
- Sequence = how a dressing is done
- Specifies products to use for each task
- Allows for “other” products
- Product choices includes one of each type of dressing as available locally
- On reverse is brief instruction guide

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Yes	No	CHECK OFF APPROPRIATE ORDERS	
		Treatment Frequency	□ daily □ bid □ q Monday-Wednesday- Friday □ other
		Cleanse with:	□ sterile NS □ sterile water □ other:
		Irrigate with: **Using:**	□ sterile NS □ sterile water □ other: □ nebules □ irrigation tip and large syringe □ pour fluid from sterile bottle (discard unused solution)
		Protect Intact Skin with	□ Cavilon Wipes® □ barrier cream or ointment
		Pack Wound/Ulcer with: **Solution amount:** **Solution type:**	□ ribbon gauze …….. inch □ kling ……… inch □ other □ Dry □ Saturate and wring out with: □ sterile NS □ sterile water □ povidone-iodine 10% solution (Betadine®) (pharmacy order) □ metronidazole IV infusion solution 500 mg/100ml (Flagyl ® minibag) (pharmacy order) □ other
		Apply to Wound/Ulcer:	□ Aquacel Ag® □ 10x10 cm □ ribbon □ Inadine® □ Acticoat 3®flex □ Intrasite® gel □ cadexomer iodine ointment (Iodosorb®) (pharmacy order) □ silver sulfadiazine 1% cream (Flamazine®) (pharmacy order) □ other
		Cover with:	□ Adaptic® gauze □ 2x2 □ 4x4 Mepilex® border □ 10 x 10 □ 10 x 20 □ sacrum □ Tegaderm absorbent® □ Comfeel® plus transparent □ Biatain® □ other
		Secure with:	□ 3 inch Medipore-H® tape □ 1 inch paper tape □ kling □ transparent film □ other:

Topical Antimicrobials

Agent	Vehicle	Products Available	Comments
Iodine	Impregnated gauze	Inadine®	10% povidone iodine
	Paste	Iodosorb® (from pharmacy)	Cadexomer iodine
	Aqueous solution	Betadine®	Povidone -iodine
Silver	Flexible cloth	Acticoat flex®	For Acticoat, cleanse with water only
	Hydrofibre	Aquacel Ag®	
Metronidazole	Solution	Flagyl® 500 mg in 100 ml IV solution (from pharmacy)	For anaerobes
Silver sulfadiazine	Cream	Flamazine®	Do not use if allergic to sulfa
Acetic acid 5%	Aqueous solution (vinegar)	Order from pharmacy	For pseudomonas

Debridement

Agent	Vehicle	Products Available	Comments
Carboxymethylcellulose + propylene glycol	Aqueous gel	Intrasite®	Autolytic debridement (coupled with surgical debridement)
Sodium hypochlorite	Aqueous solution	Hygeol 1:20®	Limited use for necrotic tissue not surgically accessible

Moisture Management

Amount of moisture	Class of Dressing	Products Available	Comments
Minimal/dry	Hydrocolloid	Comfeel Plus®	For granulation or re-epithelialization
	Acrylic	Tegaderm Absorbent®	
Moderate	Calcium alginate	Biatain® (Seasorb)	Ribbon is good for packing
		Aquacel Ag®	
Moderate	Foam	Mepilex® with border	.

Form created in 2014 for Sunnybrook HSC by E. Williams, MD, reviewed by L. Rich-VanderBij, CWS

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Summary

Document sequentially – wounds change over time

Treat or reduce systemic and local causes

Change dressing orders as wounds progress to a healing clean wound bed.

Get help:

- Work with nursing/caregivers for positioning and dressings
- OT for adaptive surfaces (wheelchair, mattress,
- Special shoes

Questions?