Objectives or “What do I need to Know?”

Upon completion of this course, students can:

Course objectives

#49 critique AHCPR clinical algorithm for debridement...
#50 design appropriate Rx...skills related to debridement...
#51 compare and contrast four methods of debridement & their uses....
#53...explain proper techniques for wound debridement...
#63 recognize when debridement is appropriate & contraindicated.
#64 predict when sharp debridement should be discontinued or stopped.
#65 differentiate between viable and non-viable tissue.
#66 give examples of how to stop bleeding.
#67 conclude when to refer the patient back to the physician.

Who Can Legally Do Sharp Debridement

- Physicians
- Podiatrists
- Physical Therapists
  - Physical Therapists Assistants?
- Nurses
- Nurse Practitioners
- Physician Assistants

Procedural Interventions Exclusively Performed by Physical Therapists

HOD 06-00-30-36

- “Procedures that require immediate and continuous examination and evaluation throughout the intervention are performed exclusively by the physical therapist. Such direct interventions within the scope of physical therapist practice that are performed exclusively by the physical therapist include, but are not limited to, spinal and peripheral joint mobilization/manipulation, which are components of manual therapy, and selective sharp debridement, which is a component of wound management.” (American Physical Therapy Association [APTA], House of Delegates, 2000, p.32)
Where To Find Legal Standards For Your Discipline

- State Practice Acts
- Company Policies & Procedures
- National Professional Standards of Practice

HCFA’s Guidelines regarding Nursing Skills in Wound Care

- Wound care, wound irrigation, cleaning of wounds, medication application to wounds, & the dressing of wounds are all activities which fall within the scope of nursing practice for the Registered &/or Licensed Practical Nurse. The debridement of wounds including the surgical debridement of wounds is within the scope of nursing practice as a Category II Activity.

Wound Management According to APTA Guide to Physical Therapist Practice

- Wound management includes procedures used to achieve a clean wound bed, promote a moist wound environment, facilitate autolytic debridement, absorb excessive exudate from a wound complex, and enhance perfusion and oxygen and nutrient delivery to tissues in addition to management of the resulting scar.

APTA Guide to Physical Therapist Practice

- As a component of wound management, debridement is a therapeutic procedure involving removal of nonviable tissue from a wound bed, most often by the use of instruments, autolysis, therapeutic modalities, or enzymes.
The desired effects of wound management may be achieved in a variety of ways. The physical therapist may use physical agents, electrotherapeutic and mechanical modalities, dressings, topical agents, debridement, and oxygen therapy as part of a plan of care to alter the function of tissues and organ systems required for repair. Wound management interventions are used directly by the physical therapist, based on patient/client needs and the direct physiological effects that are required.

Debridement Definitions

- “Non-selective debridement is the removal of non-specific areas of devitalized tissue with prior tissue preparation. Non-selective debridement may include the use of enzymatic debridement, wet dressings, wet-to-dry dressings, and wet-to-moist dressings.
- “Selective debridement is the removal of specific areas of devitalized tissue without prior tissue preparation. Selective debridement may include use of autolytic or enzymatic agents, or sharp instruments. Selective sharp debridement, which often occurs at the line of demarcation between viable and non-viable tissue, is the use of sharp instruments for tissue removal.”

(APTA, 2001, p.686)

Debridement Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Means</th>
<th>Indications</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharp</td>
<td>surgical scissors or another sharp instrument</td>
<td>thick adherent eschar, devitalized tissue, or cellulitis or sepsis</td>
<td>rapid</td>
<td>pain, clinical skill needed, licensure requirements</td>
</tr>
<tr>
<td>Enzymatic</td>
<td>Accuzyme, Collagenase, Elase, Panafil</td>
<td>May vary according to specificity of product, devitalized tissue</td>
<td>Collagenase promotes debridement and growth of granulation tissue</td>
<td>adverse reactions, maybe cytotoxic depending on product, follow package inserts</td>
</tr>
<tr>
<td>Mechanical</td>
<td>Wet-to-dry hydrotherapy, wound irrigation, dextranomers</td>
<td>Adjacent to remove foreign debris and devitalized tissue</td>
<td>Softens eschar</td>
<td>Nonselective, traumatic to new tissue formation, may be painful</td>
</tr>
<tr>
<td>Autolytic</td>
<td>Synthetic dressing, self-digest</td>
<td>Devitalized tissue</td>
<td>Patient tolerance</td>
<td>Contraindicated with infection, takes longer than other categories</td>
</tr>
</tbody>
</table>

Specific Direct Interventions

- Debridement - nonselective
  - enzymatic debridement
  - wet-to-dry dressings
- Debridement - selective
  - autolysis
  - enzymatic debridement
  - sharp debridement
  - debridement with other agents

(Adapted from Rinne, 1999)
Current Procedural Debridement

• “In the 2001 Medicare physician fee schedule final rule, HCFA introduced two new current procedural terminology (CPT) codes: selective debridement CPT 97601 and non-selective debridement, CPT 97602. Selective debridement includes debridement with the use of scalpel or water jets. As of January 1, 2001, these codes should replace G0169.”

(APTA, n.d.)

Physician Order

• An absolute necessity
• Each wound site needs to be mentioned specifically on the order
• New site - new order
• PRN orders allow flexibility to perform procedure
• QD orders may be required in addition to meet compliance with state or federal guidelines
• “Conservative sharp debridement of soft necrotic tissue” (Term used by W.O.C.N.)

Sample Physician Order

• Conservative sharp debridement of soft necrotic tissue QD and PRN of ___________________.

(wound location)

Agency for Health Care Policy and Research (AHCPR)

Ratings of available evidence supporting guideline statements

A = Results of two or more randomized controlled clinical trials on pressure ulcers in humans provide support

B = Results of two or more controlled clinical trials on pressure ulcers in humans provide support, or when appropriate, results of two or more controlled trials in an animal model provide indirect support.

C = The rating requires one or more of the following: (1) results of one controlled trail; (2) results of at least two case series/descriptive studies on pressure ulcers in humans; or (3) expert opinion.

(Bergstrom, et al., 1994)
AHCPR Guideline: Debridement
Strength of Evidence = C

• Remove devitalized tissue
  – supports the growth of pathogens
  – Debridement has not been studied in randomized trails for treating pressure ulcers

• Debridement choice is based on the patient’s condition and goals.
  – advancing cellulitis and sepsis signifies an urgent need for sharp debridement

  (Bergstrom, et al., 1994)

AHCPR Guideline: Debridement
Strength of Evidence = C (continued)

• Heel Ulcers
  – dry escar without edema, erythema, fluctuance, or drainage do not need debridement. Monitor.
  – if complications arise, debridement is mandatory

• Wet-to-dry dressings
  – usually dry within 4-6 hours
  – moistening prior to removal may partly defeat the debriding function
  – non-selective

(Bergstrom, et al., 1994)

Indications for Sharp Debridement

• Extensive Devitalized Tissue
• Signs of advancing cellulitis or sepsis
• Presence of thick adherent eschar - indicates full thickness wound
• As an adjunct in combination with other methods
• Callous formation

Contraindications for Sharp Debridement

• Arterial Insufficiency
• Gangrene
• Stable heel ulcers - ?
• Unidentifiable structures
• Terminally ill?
• Medications
  – Blood thinners
    • Lovenox

helsenet.info
Sharp Debridement Tools

- Reusable or disposable?

Disposable Vs Reusable Sharp Instruments

- **Disposable - Pros**
  - Single patient use
  - Quality is improving
  - No sterilization
  - Customized Pack
- **Disposable - Cons**
  - Quality not as high
  - Long term cost may increase
  - Limited Choices

- **Reusable - Pros**
  - Numerous choices
  - Wide range of quality
  - Unlimited use cycles

- **Reusable - Cons**
  - Higher initial expense
  - “Must” have sterilization method
  - Instrument “care” a must
  - Cleaning instruments risk - exposure

Instrument Selection

- Scissors - curved iris or straight tips
- Forceps - that clamp
- Pick-ups - with teeth
- Scalpels - variable blade sizes and shapes

Cleaning Sharp Debridement Reusable Tools

- Autoclave - expensive
- Cold sterilization - Cidex + (10 hours)
- Hot sterilization - ~ $400
Getting Ready to Debride

- Assemble all supplies
- Arrange for help
- Have adequate lighting
- Position patient for their comfort and to prevent fatigue in yourself
- Prepare aseptic field for prevention of bacterial contamination
- Provide appropriate containers for removal and disposal sharps as well as debrided tissue

Reasons to Stop Sharp Debridement

- Clinician fatigue / patient fatigue
- Bleeding
- Pain
- To viable tissue
- Location of a fascial plane
- Location of a named structure
- High anxiety level (clinician or patient)
- Achieve set time limit (15-30 minutes)

How do you stop bleeding?

- Pressure will stop most bleeding
- Elevation
- Nitrate sticks
- Calcium Alginate
- Xylocaine Jelly
- Gel Foam
- Steptocaine

Bleeding to Fear

- Bleeding you can’t see source of
- Bleeding you can hear
Pressure to Stop Bleeding

• 10 minutes by clock
• Don’t stop pressure to look

Viable Vs Nonviable Tissue

• Viable Bleeds ☑ Nonviable doesn’t (little)
• Viable Painful ☑ Nonviable isn’t
  – must be careful about this
• Viable muscle contracts ☑ Nonviable doesn’t
• Shiny sheeth on tendon
• Pulsatile structures

Table 7-2 Tissue Differentiation

<table>
<thead>
<tr>
<th>Tissue Types</th>
<th>Necrotic</th>
<th>Viable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fat</td>
<td>Dull&lt;br&gt;Gray/brown to black</td>
<td>Shiny&lt;br&gt;Yellow</td>
</tr>
<tr>
<td>Fascia</td>
<td>Dull&lt;br&gt;Gray/brown to black</td>
<td>Glistening&lt;br&gt;White</td>
</tr>
<tr>
<td>Muscle</td>
<td>Dark red/brown to gray</td>
<td>Dull red&lt;br&gt;Possible contraction if pinched</td>
</tr>
<tr>
<td>All tissue</td>
<td>Insensate&lt;br&gt;Avascular- no bleeding&lt;br&gt;Frequently foul odor</td>
<td>Vascular-bleeding possible&lt;br&gt;Little or no odor</td>
</tr>
</tbody>
</table>

Pain Control During Debridement

- Oral analgesics
- Interferential Current
- Topical analgesics
- Medications IV/IM

How Often to Debride?

- Remember it is not necessary to remove all necrotic tissue at one visit.
- It may be necessary to have several debridement sessions.

Proper Holding/Usage Techniques for Pick-ups

- Hold instrument between index finger and thumb - like a pencil
- Alternate hold pick-up in palm of hand utilizing index finger palm and thumb

Scalpel

- Can be held between index finger and thumb
- Or hold in palm technique - less control than pencil position
- Recommendation - use pencil hold
Reevaluation Consideration

- “Holes” - places you don’t want to be
- Extensive undermining you where you can’t see
- Presence (pocket) of gross purulence/infection that was unexpected

Physician Re-Evaluation Required

- Patient is febrile or on downhill course
- No wound improvement over several sessions
- New cellulitis
- Unexpected gross purulence
- Impending exposure of bone, tendon, nerve
- Abscess within the tissues
- Major vessels encountered

Anatomy is the “Key” to Comfort in Debridement

- Recognize the normal
- Avoid trouble
- Identify what you are about to remove

(Loehne, 2002, p.209)
Reference

- Clinical Educators Unlimited, Inc. (1999, December 2). Clinical debridement skills. (Available from Clinical Educators Unlimited, Inc., P.O. Box 794255, Dallas, TX 75379)