



Wound cleansing and Dressing Procedure

Margi Moncrieff
Nurse Practitioner
Flinders Medical Centre

Principles of wound management

(yes, they also apply to wound cleansing and dressing technique!)

- Define the aetiology of the wound and treat the underlying cause
 - Identify factors affecting healing
 - Wound assessment and documentation
- Management plan including dressing regimen
- Evaluation of healing and adjustment of plan
 - Maintenance of healing

Overview

- Purpose of wound cleansing
 - Solutions
 - Dressing techniques
 - ◆ Sterile
 - ◆ Aseptic
 - ◆ Wound field
 - ◆ Clean

Wound Cleansing

- “The application of fluid to aid removal of exudate, debris, slough and contaminants”
- “Wound cleansing helps optimize the healing environment and decreases the potential for infection. It loosens and washes away cellular debris such as bacteria, exudate, purulent material and residual topical agents from previous dressings. Most wounds should be cleansed initially and at each dressing change”

Solutions, techniques and pressure in wound cleansing (JBI, 2003)

- Tap water (showering) vs. no cleansing; no difference in wound infection
- Tap water vs. Normal saline; ↑ infection rate in acute wounds cleaned with sterile saline
- Sterile saline vs.. no treatment; ↑ bacterial count with N/S. ? Technique
- 1% Povidone Iodine vs. sterile NS. Lower infection rate when PI was used on contaminated wounds. No difference in acute
- Other comparisons with Procaine Spirit, ShurClens, boiled, distilled water

Solutions, techniques and pressure in wound cleansing: conclusions (JBI, 2003)

- Potable tap water is an effective cleanser for acute and chronic wounds, in healthy adults (L3)
- Irrigation with Povidone Iodine is recommended for cleansing contaminated wounds (L3)
- PI should be applied to the area, left for 3 - 5 mins, then washed off (expert opinion)
 - Pressure of 13psi (12cc syringe & 22g needle) effective in reducing infection, inflammation & bacterial count (L2)
 - Showering of post-op wounds does not increase infection or slow healing (L1)

Solutions, techniques and pressure in wound cleansing (JBI, 2006)

Techniques

- Showering does not impact on infection or healing rates of post-op wounds
- Showering ulcers and chronic wounds should be done with caution
- No research to support/refute swabbing & scrubbing to cleanse wounds
 - Sitz baths may be useful for episiotomy wounds
- Soaking in 1% PI is not effective in reducing bacterial count

Considerations

- If the wound is on the foot, bag it for showering
- When considering solutions, need to weigh up impact of bacteria on wound vs. use of antiseptics
 - If the solution causes pain, re-evaluate choice
- Environment may impact on technique and solution

Considerations

Wounds in different phases of healing require different cleansing techniques;

Necrotic wounds may require more aggressive cleansing to assist debridement

Gentler and non-traumatic for granulation tissue

Ensure the aetiology of the wound is known and that cleansing choice is appropriate

Exposure and temperature

4.4 *AWMA Guidelines*: wound healing is retarded when wound temp decreases 1°C

- Avoid exposing the wound to cooling temperatures or appliances
 - Reduce exposure time
- Use wound cleansing solutions and products at room temperature (i.e. SSD)
 - Avoid unnecessary frequent dressings

Dressing procedure and technique

STANDARD 4 BEST PRACTICE IN WOUND HEALING

Wound management is practiced according to the best available evidence for optimising healing in acute or chronic wounds.

The clinician comprehends the importance of, and is able to:

4.1 Determine when an aseptic wound management technique is required if the individual, their wound and their healing environment is compromised²⁷⁻³⁰.

Performance Criterion

- An aseptic wound technique using sterile equipment will be used when: the client is immunosuppressed, the wound enters a sterile body cavity (i.e. nephrostomy or central venous line), during the peri-operative period, or the wound healing environment is compromised.

4.2 Determine when a clean wound management technique is acceptable if the individual, their wound and their healing environment are not compromised^{27, 31-34}.

Performance Criterion

- A clean wound management technique i.e. washing or showering of wounds, may be implemented when the criterion for Standard 4.1 is not demonstrated or when policies and procedures dictate.

What denotes "compromised?"

- Any individual who is an in-patient in an acute care setting!
 - If the wound is the primary cause of admission
 - Immunosuppressed; drug mediated (i.e. chemo), diseases (i.e. HIV)
 - Health conditions; i.e. diabetes, PVD
 - Specific wounds/procedures, i.e. burns, SSG, r/o drains, CVC/PICC dressings, acute wound dehiscence to deep cavities (i.e. sternum)

Sterile technique

- Method to reduce exposure to micro-organisms
- Used in the OR for surgical procedures
- Involves use of sterile gown, gloves, masks, equipment, dressings and surgical drapes
- May be used in some ward situations i.e. burns dressings, VAC to sternum

Aseptic technique

- Taught as standard dressing procedure in many Uni's
 - Asepsis; "absence of pathogenic organisms"
- Method used to minimize contamination by pathogens and protect the patient from infection
 - Sterile gown and gloves not required
 - Different pack required for different wounds
- If the dressing field becomes contaminated, the pack must be discarded

Aseptic technique (and a few myths!)

- Hands washed (+- gel) before opening pack, after opening pack, after removing dressing and after dressing procedure
- Involves a non-touch technique using forceps
 - (gloves not required)
- Once an object is picked up from the field, it cannot be placed down again (in strict aseptic technique)
- Differentiate between clean and dirty forceps (myth!)
 - Wipe wound once, then discard swab (myth!)

Aseptic technique

- Where is the evidence that supports all aspects of strict aseptic technique for all wounds?
 - Traditional vs. evidence based
- Nurses indoctrinated into technique and it is still being taught
- The focus becomes procedural, not on the wound cleansing/dressing
 - Time for change

Modified aseptic technique

- Used when strict asepsis is not required
- Often used in community / home care settings
- Instruments are still used to handle/apply dressings
 - Objects can be placed back down on field again;
- place touched handles of instruments on edge of field
 - Clean items are kept away from sterile

Gloves

- *Standard precautions* to protect the wearer and the patient
 - You never know when MRSA is lurking!
 - Gloves are an adjunct to hand washing/gels
- Use sterile gloves when performing strict aseptic dressing procedure if you want to touch the dressing field, instruments and/or wound
- 4.6 AWMA guidelines; Use non-sterile or sterile gloves when there is a risk of contamination to the individual or clinician

Contamination in wound dressing procedure (Tal Ellis 2004)

- Contamination is “an act” involving the “introduction of microorganisms into a wound and the wound field”
- Research demonstrates that exogenous introduction of microorganisms into wounds occurs principally by direct contact
- Limiting direct contact between the hands of the clinician is the most effective way of reducing contamination
 - (case for gloves)
- All wounds have microorganisms present; only exogenous microorganisms can cause contamination

Wound field theory

- Consists of the wound to be dressed and the materials used to achieve this, including the dressing pack
- The wound and dressing sheet are a continuum and form the "wound field"
- Microorganisms can be transported from the wound to the dressing sheet; contamination is not considered to have occurred
- In effect, the dressing procedure is about preventing contamination

Clean technique

- 4.2 AWMA guidelines; the clinician will determine when a clean technique is acceptable; i.e. washing, showering
- Usually used for chronic wounds where the patient is not compromised
 - Infection control principles continue to apply
- Incorporates the use of clean solutions and dressings
 - Dressing pack may not be required

Which technique, which solution ?

- Base choice on the individual and their wound
- Aetiology of wound (i.e. acute, chronic, ischaemic)
- Factors affecting healing (i.e. immuno-suppression, diabetes)
- Stage of wound healing (necrotic vs granulating)
 - Environment (hospital vs home)
- Regardless, follow the principles of "do no harm" and "let's not introduce anything new to the wound"!!!