Wound Product Categories

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Objectives

- The attendee will be able to list 3 different categories of wound products
Some Basics

- Application of moist wound healing by adding moisture to dry wounds
- Absorbent dressings to absorb wound exudate
- Debridement
- A dry cell is a dead cell
Moist wound healing

- Moist wound healing was started by Dr. George Winter in about 1962 when he found that a moist wound healed twice as fast as a dry wound.

- With the concept of moist wound healing the purpose of products has expanded from hemostasis, prevention of infection and wound protection.
Wet-To-Dry and Wet To Moist Dressings

- Wet to dry became the gold standard of wound care and is still often used and sometimes appropriate.

- The more advanced dressings cost more

- OR do they?
Wet to Dry - Wet to Moist

- Consider the cost of the dressing
- Cost of nursing labor
- Indirect costs, gloves, biohazard waste
- Cost of duration, how long it takes to heal
- Wet to dry needs to be done at least twice a day
- More advanced product can be left on longer, some up to 5 to 7 days
When a wound is open to air, it can take up to 4 hours for it to warm back up for healing.

One study showed that bacteria were capable of penetrating 64 layers of gauze.

Another study showed that a semiocclusive dressing total cost was $15.90 while wet to dry total cost was $25.31.
Moist wound healing

- Facilitation of debridement
- Reducing pain
- Diminished scarring
- This all has led to
Over 2000 products on the market!
Hydrocolloids

- Original patent in 1953
- First used in ostomy flanges (1980)
- First used as wound dressing in 1989
- Occlusive
- Impermeable to bacteria and fluids
- Facilitates autolytic debridement
- Minimal to moderate absorption
- Thermal insulation
Hydrocolloid Indications

- They once were the “gold standard” BUT
- With the advent of silicone dressings
- Hydrocolloids are not used as often
- Can be a primary or secondary dressing
- Partial or full thickness wounds
- Wounds with slough or necrosis
- Some select pressure ulcers
Silicones

- Silicones are becoming widely established in wound care.
- They make ideal adhesives because they are highly compatible with the skin and can be rendered soft and flexible.
- Combine that with properties which promote wound healing, water-vapor and gas permeability and the outcome is gentle adhesive properties that are kind and beneficial to the skin.
- Silicones also help scars to heal, making them look more attractive and less conspicuous.
Transparents

- Original patent in 1963
- First wound dressing developed in 1988
- Waterproof
- Permeable to oxygen and moisture
- Impermeable to bacteria
- Facilitate autolytic debridement
- Allow wound observation
**Transparent dressings**

- Primary or secondary dressing
- Prevent and manage Stage I pressure ulcers
- Partial-thickness wounds with minimal exudate
- Wounds with necrotic tissue or slough
- Do not use on infected wounds
- NEVER use on fragile skin
Alginates

- Derived from brown seaweed
- Soft, nonwoven fibers
- An alginate can absorb up to 20 times its weight
- Good for highly exuding wounds
- Forms a soft gel within the wound bed
- Maintains a moist healing environment
Alginates

- Comes in ropes or sheets
- Fill in dead space in a open wound
- Easy to apply and remove
- Require a secondary dressing to hold them in place
- Facilitate autolytic debridement
Antimicrobials and Antifungals

- Topical wound care products derived from agents such as
  - Silver
  - Iodine
  - AMD – antimicrobial dressing
  - Honey
  - Hydrofera blue
  - Miconazole Nitrate (antifungal powders, creams and ointments)
Antimicrobial dressings

- Many of these advanced dressings can stay on the wound from 3 to 7 days
- Decrease the bacterial load in the wound
- Indicated for draining, infected wounds
- They come in MANY forms - foams, sheets, gels, powders, alginates, post op dressings (telfa type with tape border), rope, packing strips, contact layers and more.
Collagens

- Most abundant protein in the body
- Collagen encourages the deposition and organization of newly formed collagen fibers and granulation tissue
- Used in partial and full thickness wounds
- Infected or noninfected wounds, donor sites
- Requires a secondary dressing
Composite dressings

- Two or more physically distinct products
- Multilayered, waterproof, all in one dressings
- Usually sterile and in a package
Contact layers

- Single layers of a woven net that protects the base of the wound
- Requires a secondary dressing
Foams, foams, and more Foams

- Thermal insulation…the warmest dressing
- Come in pads, sheets, with and without adhesive borders
- Nonlinting and absorbent
- Thin or thick
- They have a nonadherent layer
- Allow for nontraumatic removal
Foams

- Easy to apply and remove
- May be used under compression
- Absorb light to heavy exudate
- May be used as primary or secondary dressing
- May use around tubes
- Some foams are impregnated with silver
Negative Pressure Wound Therapy

- In 1996, KCI (Kinetic Concepts) introduced this innovative approach to the treatment of serious, complex wounds through the use of sub-atmospheric or negative pressure.
Wound negative pressure

- NPWT promotes wound healing by applying a vacuum through a special sealed dressing. The continued vacuum draws fluid and waste from the wound.

- It includes a vacuum pump, drainage tubing and a dressing kit. It has been indicated that wounds heal 60% faster with NPWT.
Negative Pressure

- In these 18 years, other companies (13 vendors) have developed negative pressure therapies.
- Some of them use gauze instead of foam often with good results.
Hydrogels

- Water or glycerin based gels
- Impregnated gauzes or sheets
- Not used for highly exudating wounds
- Do maintain a moist healing environment
- Promote granulation and epithelialization
- Facilitate autolytic debridement
- Soothing and reduce pain
Hydrogels
Chronic wounds

- In 2009, more than 5.7 million in our US had chronic wounds.

- Global economic burden of wound care is approximately $20 billion annually.

- NOT taking into account the impact on quality of life.
In hospitals, since 2008, CMS will not pay for pressure ulcers developed after hospital admission.

In Home Care must assess for pressure risk and implement preventive measures; must use moist wound healing for pressure ulcers.

Wound care deterioration is monitored by CMS (Centers for Medicare and Medicaid).
Questions
Thank you!
Resources

- http:www.npuap.org
- Deborah Whittemore, MSN, ANP, CWCN. Wound Management: Past, Present & Future. www.husson.edu
- www.kci1.com
Resource

- Ovington, Liza G, “Hanging Wet-To-Dry Out To Dry” Advances in Skin & Wound Care: The Journal for Prevention and Healing, March/April 2002, Volume 15 Number 2, Pages 79-84