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Disclaimer

- Please no pictures of slides for patient protection
- There will be pictures and videos

Describing the "wound Picture"

- -"W" wound location
- -"O" Odor assess before and during dressing change
- "U" Ulcer Category
- "N" Necrotic Tissue
- "D" dimensions of the wound (shape, length, width, depth) drainage color, consistency and amount
- "P" Pain (when it occurs, what relieves it)
- "I" Induration
- "C" Color of wound bed
- "T" Tunneling
- "U" Undermining
- "R" redness
- "E" Edge of skin loose or tightly adhered

Categorizing wounds

- Venous Ulcers
- Arterial Ulcers
- Diabetic Ulcers
- Pressure Ulcers
- Sickle Cell Ulcers
- Surgical Wounds
- Atypical wounds

Venous

Venous Ulcers

Usually found on lower extremities at the pretibial and medial supra-malleolar areas of the ankle, where perforators are located

Due to Venous Hypertension. Resulting in superficial vein distension leading to vein wall damage and exudation of fluid into the interstitial space. Leading to Venous Insufficiency

Diagnosis- Physical exam

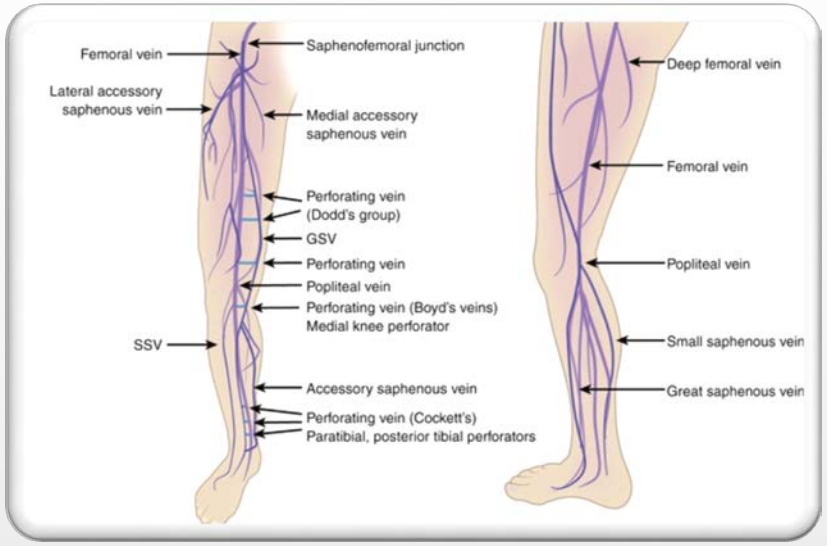
-Hyperpigmentation, dermatitis, lipodermatosclerosis or atrophie blanche, a characteristic white patchy scarring

-Assess the color of each toe

-Skin appears dusky ruddy color

-palpate for skin temperature changes

-Edema



Diagnosis-Imaging

-Vascular Ultrasound both arterial and Venous with reflux

Mainstay of Treatment

Compression and elevation

Can place agents that promote granulation tissue under an Unna

One study showed foam dressing over ulcer healed ulcer twice as fast

Always wrap from toes up and pad bony areas to prevent pressure ulcers

Arterial Wounds

Arterial ulcers

- Signs and symptoms of arterial disease
  - Shiny, atrophic skin
  - Decreased profusion when elevating leg
  - Loss of hair distally
  - Skin feels cool or cold
  - Lack of pulses
  - Complains of pain (Claudication)

Work-Up

- Handheld Doppler for pulses
- Arteriogram-invasive
- Arterial doppler- severely diseased arteries will have a monophasic low amplitude
- Ankle Brachial index
  - 1.0-1.2 normal
  - 0.75-0.9 moderate disease
  - 0.5-0.75 severe disease
  - <0.5 rest pain or gangrene
  - Unreliable Diabetes

Treatment

- May require Revascularization to establish blood flow.

Diabetic Foot Ulcer


DOCTOR, WE'VE GOT ANOTHER PUNCTURE WOUND!
DARN IT...
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Diabetic Foot Ulcers

- Definition
  - Wounds from ill-fitting shoes, ulcers on weight-bearing areas and penetrating injuries from puncture wounds or other traumatic events

Diabetic Foot Ulcers

- Diabetes affects sensory, motor and autonomic nerve function
- 56% will be treated for soft tissue infection during the course of their ulceration
- Hyperglycemia impairs leukocyte functioning, including phagocytosis and intracellular killing function.
- Use of superficial wound swabs are discouraged. Tissue samples should be sent from the base of the wound.


Where are my pants?
SayingImages.com
Over there, on my hope chest.

Pressure Ulcers

- Stage 1 pressure injury - Nonblanchable erythema of intact skin
- Stage 2 pressure injury - Partial-thickness skin loss with exposed dermis, may represent an intact or ruptured blister
- Stage 3 pressure injury - Full-thickness skin loss, subcutaneous fat may be visible
- Stage 4 pressure injury - Full-thickness skin and tissue loss with exposed bone, tendon or muscle
- Unstageable pressure injury - Obscured full-thickness skin and tissue loss
- Deep pressure injury - Persistent nonblanchable deep red, maroon or purple discoloration

Stage 1

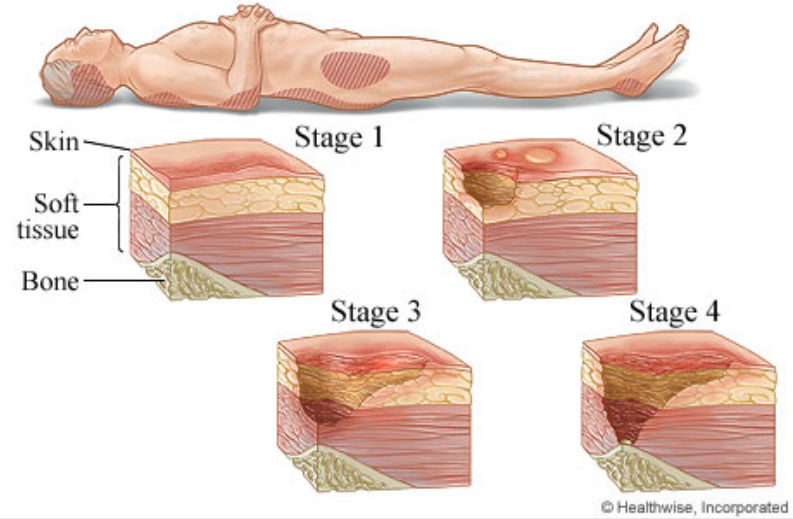
Stage 2

Stage 3

Stage 4

Deep Tissue Injury

Unstageable



Staging pressure ulcers

DOC: I WENT TO A REJUVENATION CLINIC AND GOT A WHOLE NATURAL OVERHAUL. THEY TOOK OUT SOME WRINKLES, DID HAIR REPAIR, CHANGED THE BLOOD, ADDED A GOOD 30 TO 40 YEARS TO MY LIFE. THEY ALSO REPLACED MY SPLEEN AND COLON. WHAT DO YOU THINK?

Keys

- Prevention
  - High protein oral supplements (30-35 calories/kg body weight)
  - Repositioning is a must! Importance of a team approach
  - Foam or Air mattress
  - Control infection (Do not swab culture the wound)
  - Avoid shearing forces and Friction

- Importance of a team approach

TREATMENT OPTIONS FOR ALL WOUNDS

Let the wound speak to you

Dry wound Treatment options

Transparent film:

- benefits See through and waterproof, can be impregnated with silver

Hydrogel: Water or glycerin based.

- Benefits: non-adherent, softens and loosens necrosis and slough, change every 24-72 hours, can be impregnanted with silver.
- Disadvantages: may macerate periwound

Light Drainage Treatment options

- Hydrocolloid: occlusive dressing impermeable to bacteria and contaminates.
  - Benefits: Facilitates autolytic debridement, long wear time 3-7 days. Can be impregnated with silver.
  - Disadvantages: contraindicated with muscle, bone or tendon. Can be difficult to remove. Indications: Stage 1 or 2 pressure ulcers, preventative for friction areas, first and second degree burns
- Hydrogel

Light drainage treatment options

Collagen: major protein of the body, stimulates cellular migration and contributes to new tissue development

Advantages: absorbent, non adherent. Conforms well. Can be impregnated with silver

Disadvantages: not for necrotic wounds

Indications: chronic non-healing wounds, Stage 3 and 4 pressure ulcers, surgical wounds, donor sites

Moderate to heavy Draining wounds

- Foam: Hydrophilic polyurethane or gel film coated foam.
  - Benefits: non-adherent, can change every 3-5 days depending on drainage. Can be impregnated with silver.
  - Disadvantages: Not recommended for dry wounds or dry eschar. May macerate periwound area if not changed appropriately.
  - Indications: partial and full thickness wounds, Stages 2-4 pressure ulcers, under compression wraps/stocking, tunneling wounds

Moderate to heavy draining wounds

Calcium alginate: nonwoven composite of fibers from calcium-sodium alginate

Advantages: trauma free removal, can be used on tunneling wounds, hemostatic properties for minor bleeding, change every day to every other. Can be impregnated with silver

Disadvantages: contraindicated for dry eschar, 3rd degree burns, surgical implantation and heavy bleeding. Gel may have odor during dressing change. Silver can change the color of drainage.

Indications: Partial to full thickness wounds, stage 3-4 pressure ulcers, post-op wounds for hemostasis, tunnels or cavities

"...now apply pressure and hold it there. It's highly absorbant and will speed healing..."

Negative Pressure Wound therapy

Non-invasive active therapy using localized negative pressure to promote healing

Indications: moderate to heavy drainage, partial to full thickness wounds; venous, arterial, diabetic ulcers and dehisced wounds. Stage 3-4 pressure ulcers, Flaps and grafts

Advantages: decreased edema, decreases bacterial colonization, increases blood flow, change every 48-72 hours.

Negative Pressure Wound Therapy

- Disadvantages
  - Staff Needs to be trained
  - Not reimbursed in acute and long term care facilities
  - May adhere to wound
  - Contraindicated for wounds with malignancy and untreated osteomyelitis

Regranex

Approved for treatment of lower extremity wounds in Diabetic patients with adequate blood supply.

Recombinant Platelet derived growth factor

- Stimulate fibroblast proliferation to increase growth of granulation tissue
- Increase the rate of re-epithelialization and revascularization
- Promote collagen production

Common side effects

- Red skin rash
- Burning at application site

Enzymatic Debridement

Prescriptive collagenase ointment that digests collagen
Trade name: Santyl
Indication: debride necrotic wounds, pressure ulcers, dermal ulcers and post op wounds
Advantage: collagen in healthy tissue is not attacked, nonsurgical method of debridement, requires daily changes
Disadvantages: adversely affected by certain detergents, acidic solutions, and heavy metal ions such as mercury and silver

Speeding the healing process

Debridement is a necessary step in local wound care

Debridement is the removal of necrotic tissue, exudate, bacteria and metabolic waste from a wound

Removing necrotic tissue creates an acute wound within a chronic wound, restoring circulation and allowing adequate oxygen delivery

Methods

- Sharp debridement
- Enzymatic debridement
- Mechanical: wet to moist
- Pulse Lavage

Wet to Dry Dressing

Center for Medicare and Medicaid services recommend limited use

Not only removes necrotic tissue but also good tissue

Painful

Time consuming

In Closing

1. Categorize the wound. Measure routinely.
2. Let the wound speak to you and guide your treatment accordingly
3. High index of suspicion for Osteomyelitis in wounds with bone exposed. Consider MRI, Bone biopsy or ID consult
4. Try to avoid wet to dry dressings if possible

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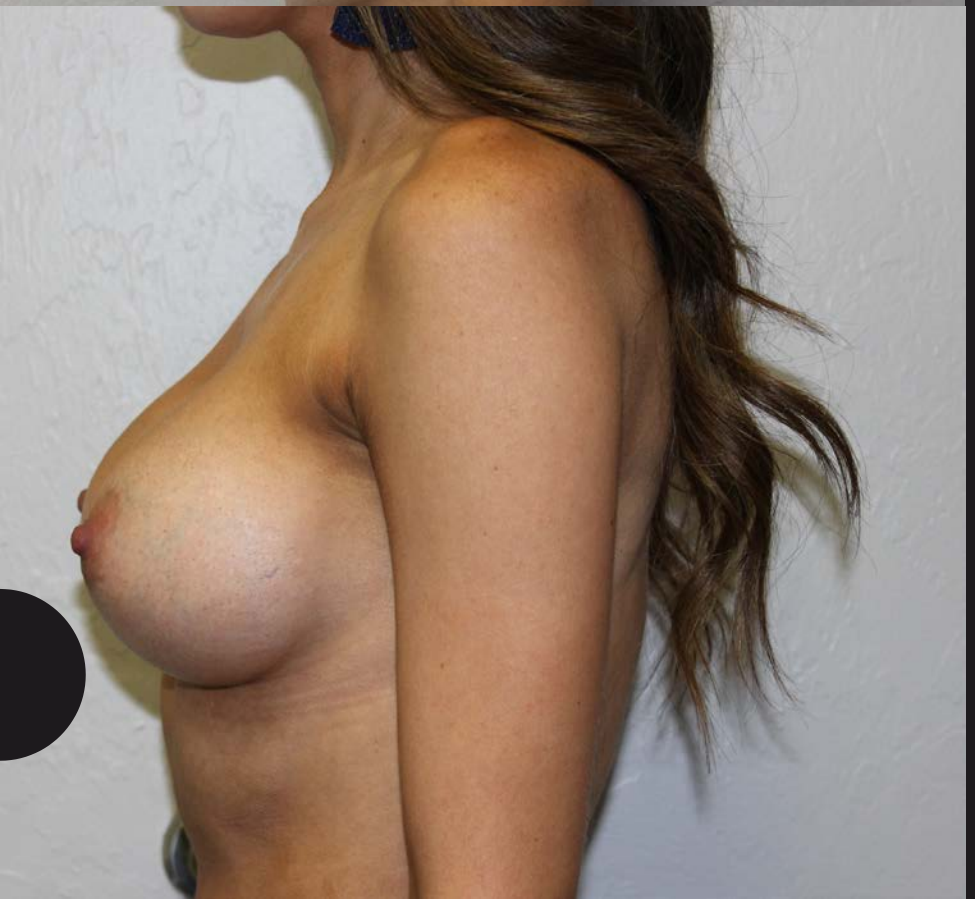
Marty McFly: I'm fine, I'm fine. It's just that you're so... you're so... big.

The Big "C" Word

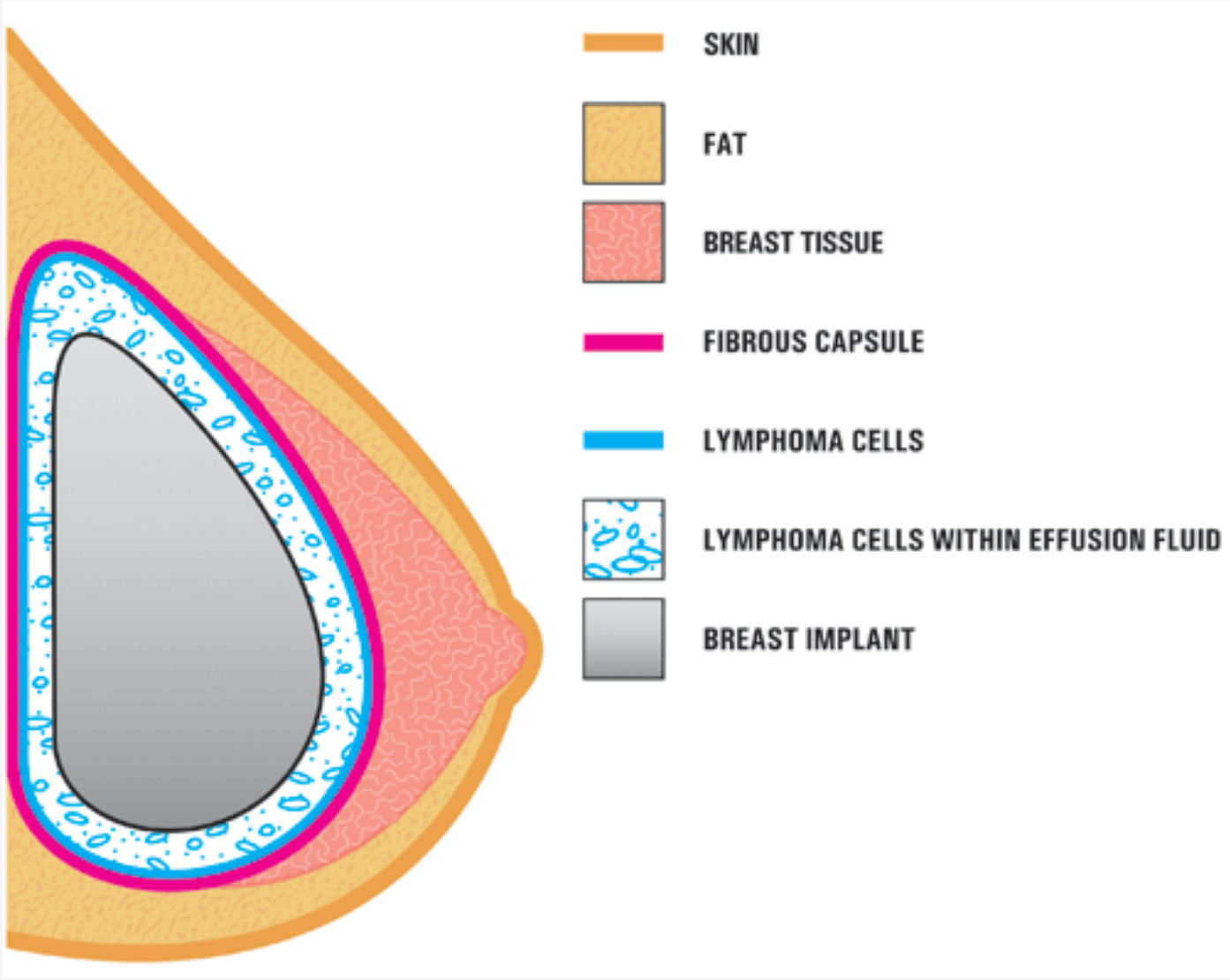
- FDA has identified a possible connection with breast implants and Anaplastic Large Cell Lymphoma (BIA-ALCL).
  - First case was identified in 1997 in a patient with saline implants
  - The cancer risk 3 in 100 million women.
  - Occurred in both saline and silicone implants. But was found only in textured implants.
  - Confined to around the implant. And is treatable when diagnosed properly
  - Different than breast lymphoma which attacks B cells. BIA-ALCL attacks T cells.



The Big "C" Word

- Signs and Symptoms
  - Late Onset, Peri-implant seroma (many months to years after surgery). Usually occurs 7-8 years after augmentation
  - Redness and swelling around the implant. Not to be confused with an infection.
  - Less common is contracture of the scar tissue around the breast implant

- Diagnosis
  - If seen on mammogram it is important to test the fluid for cytology. If a mass is presents then Wright Geimsa Stain, testing for CD 30 and Anaplastic Lymphoma Kinase marker.



THE BIG "C" WORD

Where does the cancer occur

The Big "C" Word

- Treatment
  - Main focus is surgical
    - Removal of the implant and surrounding capsule.
    - Lymph node dissection
  - Advanced disease
    - Rare cases radiation maybe used in combination
    - Chemotherapy

The Big "C" Word

- Let's Talk Numbers
  - No smooth surface implants have been identified to cause BIA ALCL
  - FDA has reported 573 cases and 33 deaths. Of these 481 were associated with Allergan Textured implants.
  - 33 deaths only 13 were the implants known. 12 of these were Allergan Textured implants
  - 93% when treated are disease free in 3 years

The Big "C" Word

- What we are doing now
  - Both Mentor and Allergan are participating in research efforts
  - April 2019
    - France and Canada have removed Allergan Textured implants from the market
    - ** USA have now pulled Allergan Textured implants
    - 86% of the cases of BIA-ALCL cases in Canada were associated with Allergan Textured implants

Patient Information

- Natrelle saline-filled breast implants
- Natrelle silicone-filled breast implants
- Natrelle Inspira silicone-filled breast implants
- Natrelle 410 highly cohesive anatomically shaped silicone-filled breast implants.
- The recall also includes tissue expanders used by patients before breast augmentation or reconstruction, including Natrelle 133 Plus tissue expander and Natrelle 133 tissue expander with suture tabs

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