A SKIN GAZERS EYE TO WOUND CARE AND SKIN LESIONS

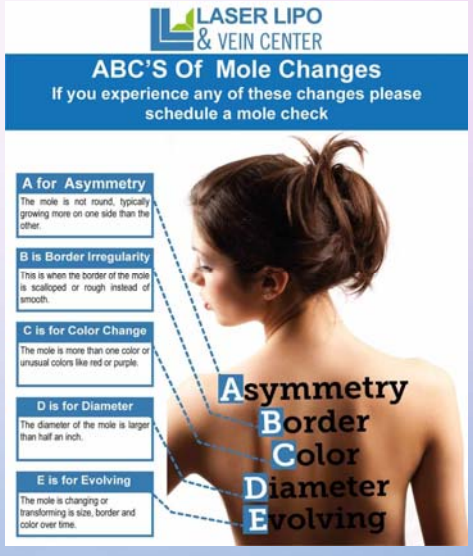
BY: LAURA JANE HOLSEY, DO

LEARNING OBJECTIVES

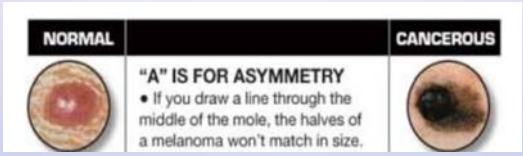
- Identify Malignant versus Benign Skin cancers
- Proper work up for suspicious lesions
- Treatment options for skin lesions
- Properly assess a skin wound
- Categorize common skin wounds
- Treatment options for skin wounds

RULE OUT THE WORST FIRST

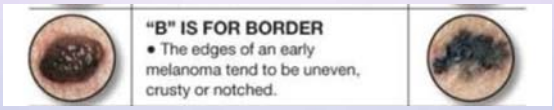
KEEP IT SIMPLE



ASYMMETRY

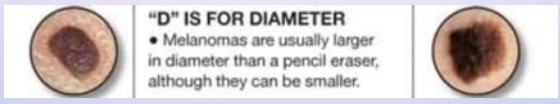


BORDER LINE



IN LIVING COLOR

DIAMETER



IT'S AN EVOLVING SITUATION

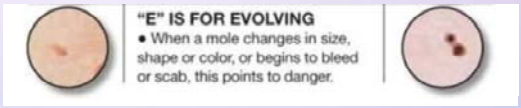
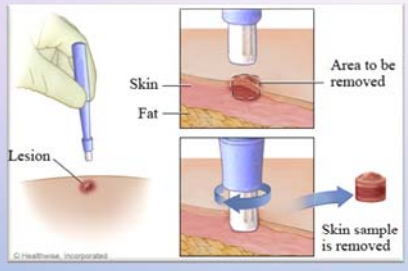


Table 1: Risk Factors for Melanoma
• UV exposure
• Number of moles (both normal and atypical)
• Fair skin, freckling, light hair
• Family history of melanoma
• Personal history of melanoma
• Immunosuppression
• Age: Risk increases with age
• Gender: Males > females
• Xeroderma pigmentosum

Information from the American Cancer Society, 2009.



DIAGNOSIS

NEVER SHAVE THESE LESIONS

MELANOMA

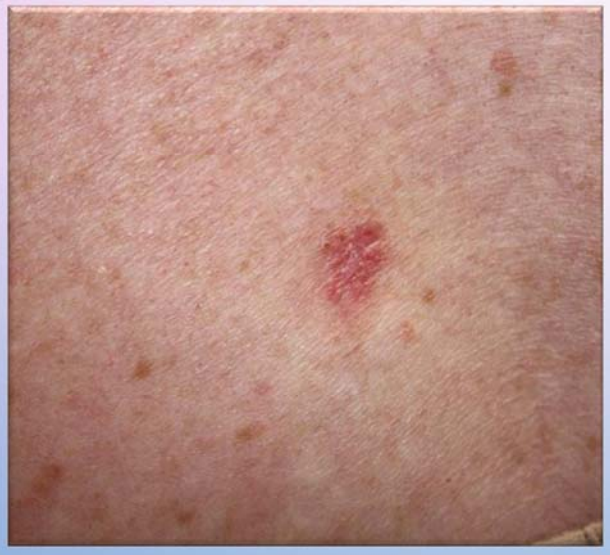
- Neoplasm of the melanocytes
- Two growth phases: Radial and Vertical
- Lesions are categorized by their depth

HISTOLOGIC TYPES

- Superficial spreading- most common
- Nodular- Most worrisome
- Lentigo maligna
- Acral lentiginous- can occur on palms and soles, very aggressive
- Mucosal lentiginous

TREATMENT IS STAGE BASED

- Stage 0 – Excision
- Stage I – Excision, with or without lymph node management
- Stage II – Excision, with or without lymph node management
- Resectable stage III – Excision, with or without lymph node management; adjuvant therapy and immunotherapy
- Unresectable stage III, stage IV, and recurrent melanoma – Intralesional therapy, immunotherapy, signal transduction inhibitors, chemotherapy, palliative local therapy

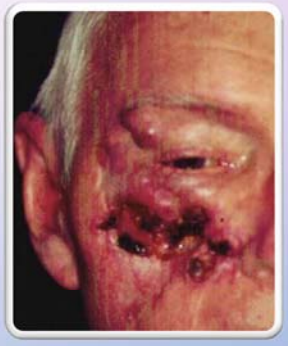


BASAL CELL CARCINOMA

- MOST COMMON SKIN CANCER IN HUMANS
- ACCOUNTS FOR LESS THAN 0.1% OF PATIENT DEATHS FROM CANCER
- FLAT, FIRM, PALE AREA THAT IS SMALL, RAISED, PINK OR RED, TRANSLUCENT, SHINY, AND WAXY, AND THE AREA MAY BLEED FOLLOWING MINOR INJURY
- NON-MELANOCYTIC SKIN CANCER

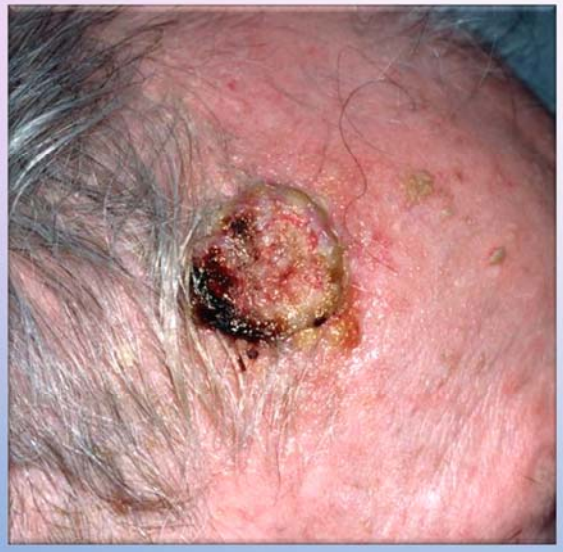
LOCATION, LOCATION

- ON THE HEAD AND NECK (MOST FREQUENTLY ON THE FACE ; MOST COMMON LOCATION IS THE NOSE, SPECIFICALLY THE NASAL TIP AND ALAE) – 85%
- ON THE TRUNK AND EXTREMITIES [1] –15%
- ON THE PENIS, [8] VULVA, [9, 10] OR PERIANAL SKIN – INFREQUENT



TREATMENT

- imiquimod 5% cream and topical 5-fluorouracil 5% cream for non-facial, superficial, and less than 2 mm
- Radiation therapy for non-surgical candidates
- Surgical therapies include electrodesiccation and curettage, excisional surgery, Mohs micrographically controlled surgery, and cryosurgery

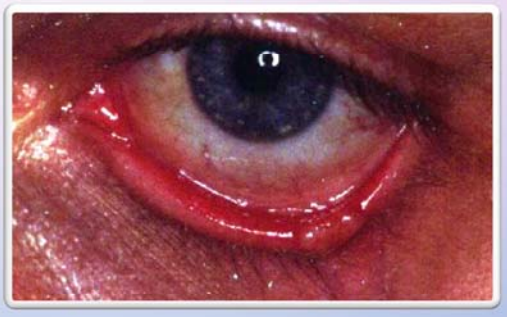


SQUAMOUS CELL CARCINOMA

NON-HEALING WOUND OR GROWTH IN SUN EXPOSED AREA

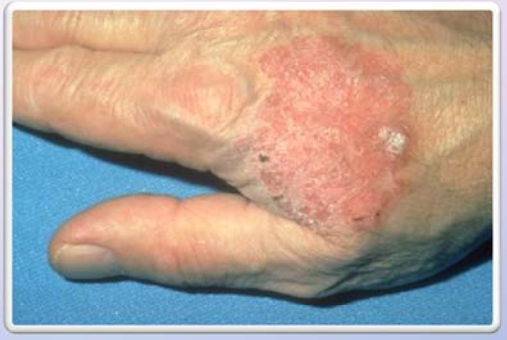
PHYSICAL EXAM

- COMMON ON HEAD AND NECK
- MAY APPEAR AS PLAQUES OR NODULES WITH VARIABLE DEGREES OF SCALE, CRUST, OR ULCERATION
- EVALUATE NERVE FUNCTION TO RULE OUT PERINEURAL INVOLVEMENT



BOWEN'S DISEASE

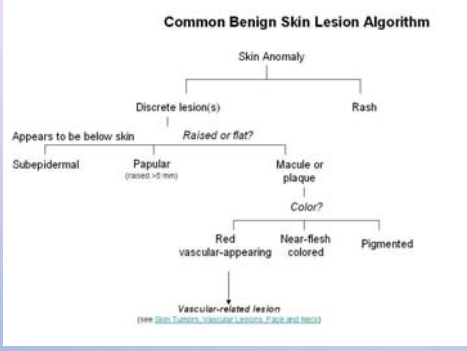
- SHARPLY DEMARCATED, PINK PLAQUE ARISING ON NON-SUN-EXPOSED SKIN

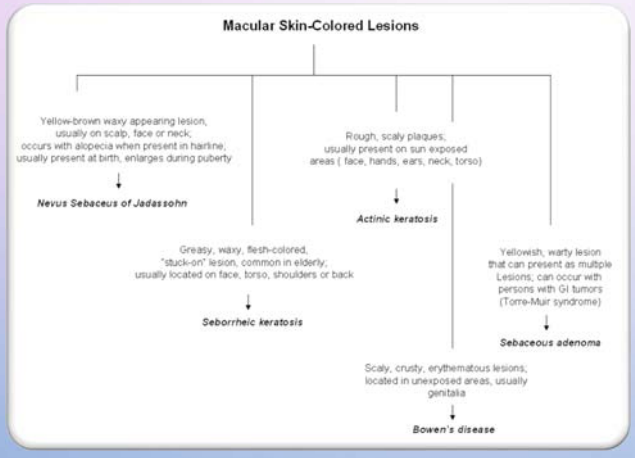


TREATMENT OPTIONS

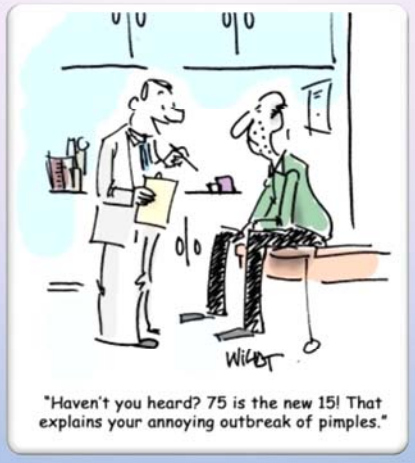
- Low risk cutaneous lesions on the extremities or trunk- electrodessication and curettage
- Invasive SCC- surgical excision and Mohs micrographic surgery
- Adjuvant Radiation to surgery to improve locoregional control
- Radiation can be primary in non-surgical candidates
- Systemic chemotherapy for metastatic lesions may be indicated

COMMON BENIGN LESION ALGORITHM



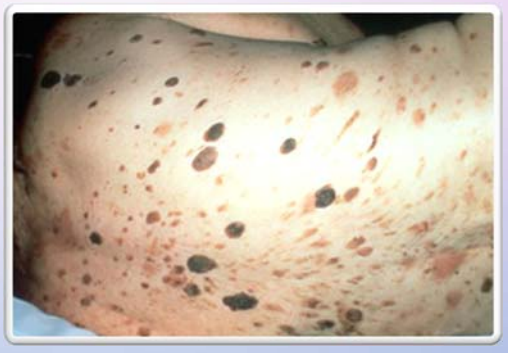


MACULAR LESIONS

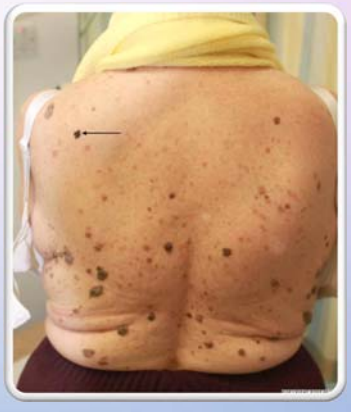


SEBORRHEIC KERATOSIS

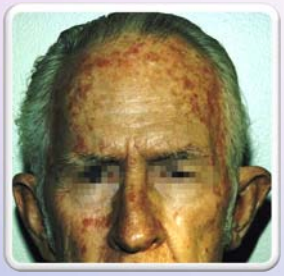
- –FOUND ANYWHERE ON THE BODY EXCEPT PALMS AND SOLES
- –COLOR IS VARIABLE
- –TEXTURE CAN BE VELVETY TO WART LIKE
- –SK'S BEGIN IN THE 4TH DECADE OF LIFE AND CONTINUE TO INCREASE
- –WHEN IN DOUBT SCRATCH THE LESION FOR A WAXY APPEARANCE. IT WILL CRUMBLE AND FLAKE

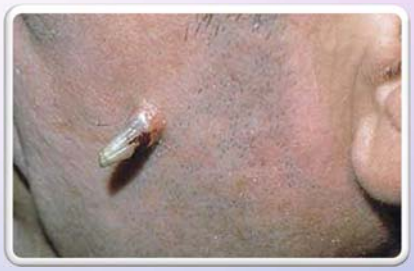


DON'T FORGET THE UGLY DUCKLING



"And just where is this lesion, Mr. Avery?"

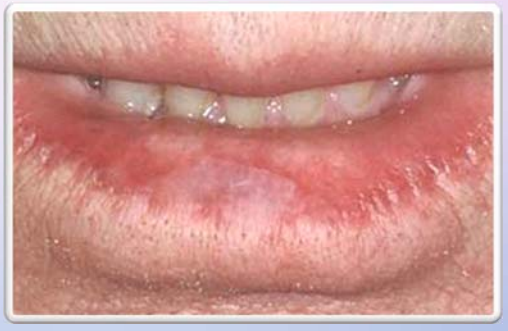




ACTINIC KERATOSIS

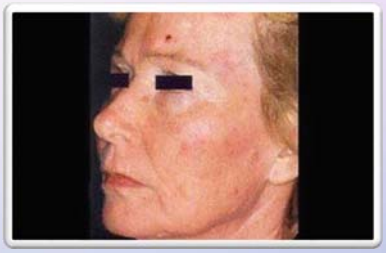
ACTINIC KERATOSIS

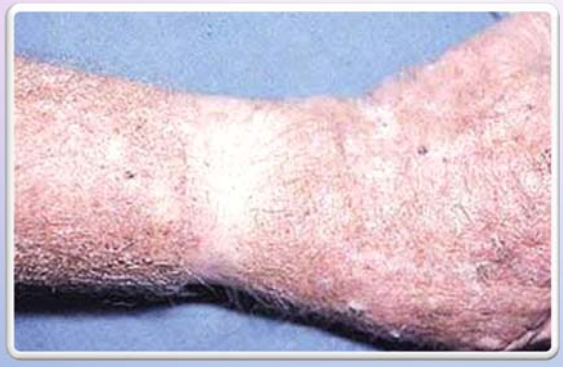
- –OCCUR ON SUN EXPOSED SKIN
- –IF LEFT UNTREATED CAN BECOME SQUAMOUS CELL CARCINOMA
- –S/S: ROUGH PATCH THAT IS NOT SEEN, ROUGH PATCH THAT COMES AND GOES, ITCHING OR BURNING



TREATMENT– IN OFFICE

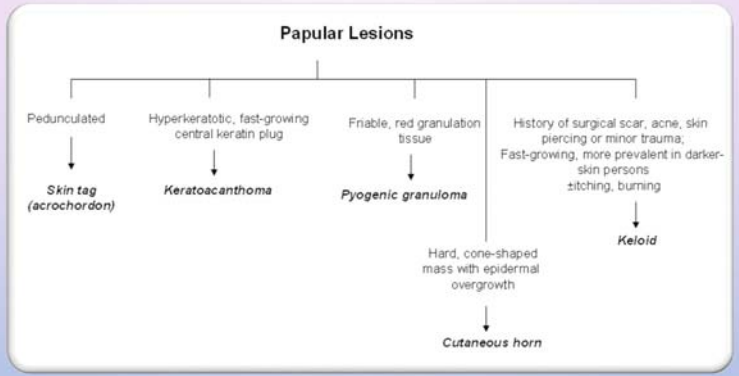
- CRYOTHERAPY (NO VS CO2)
- TCA PEEL
- ELECTROSURGERY AND CURETTAGE
- LASER RESURFACING





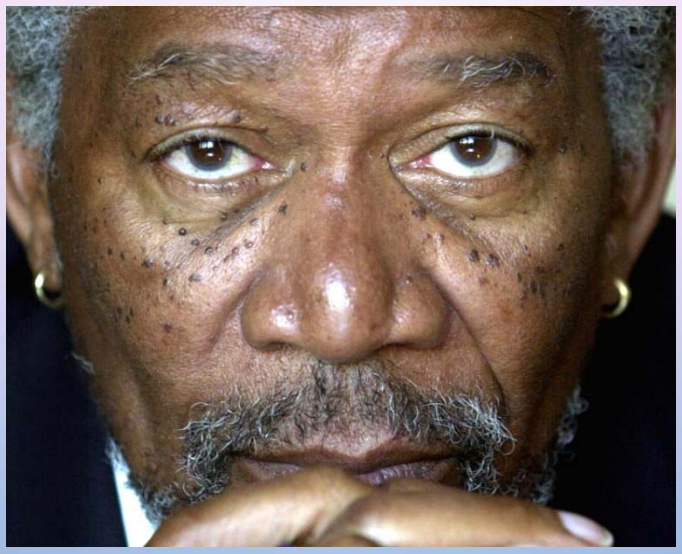
MEDICINAL TREATMENT

- -5-FLOROURACIL CREAM: APPLIED BID FOR 2-4 WEEKS. MAY REQUIRE FOLLOW UP CRYOTHERAPY FOR THICK AK
- -DICLOFENAC GEL: TWICE DAILY FOR 2-3 MONTHS. SKIN WILL BE VERY SUN SENSITIVE.
- -IMIQUIMOD CREAM: BOOSTS YOUR OWN IMMUNE SYSTEM TO DESTROY ABNORMAL SKIN CELLS



Pigmented Lesions

- Dark brown lesion; rough, fissured surface → ***Seborrheic keratosis (wart)***
- Multiple dark colored lesions; dark-skinned patient → ***Dermatosis papulosa nigra***
- Brown to dark brown lesion; usually solitary, history of insect bite, "dimple sign" → ***Dermatofibroma***
- ***Nevus***



DERMATOSIS PAPULOSIS NIGRA

-THESE ARE NOT FRECKLES

-COMMON ON CHEEKS OF DARKER SKIN

-TREATMENT? NEVER CRYOTHERAPY!

IN CONCLUSION

- Remember your abc's when evaluating a lesion
- Yearly skin exams on high risk patients
- If it's suspicious -> biopsy. Avoid Shave biopsies if concerned for melanoma or Squamous cell
- Don't forget the ugly duckling

CHANGING GEARS

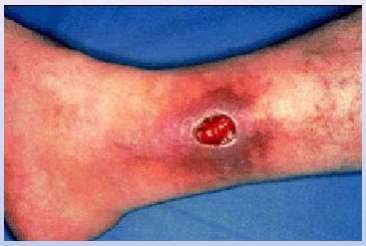
DESCRIBING THE "WOUND PICTURE"

- –"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

GUESS WHO I AM?



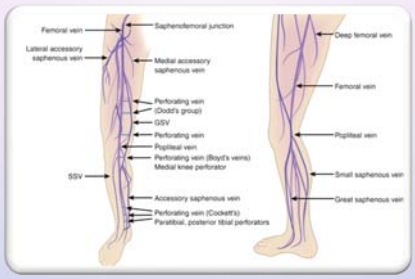
VENOUS ULCERS

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

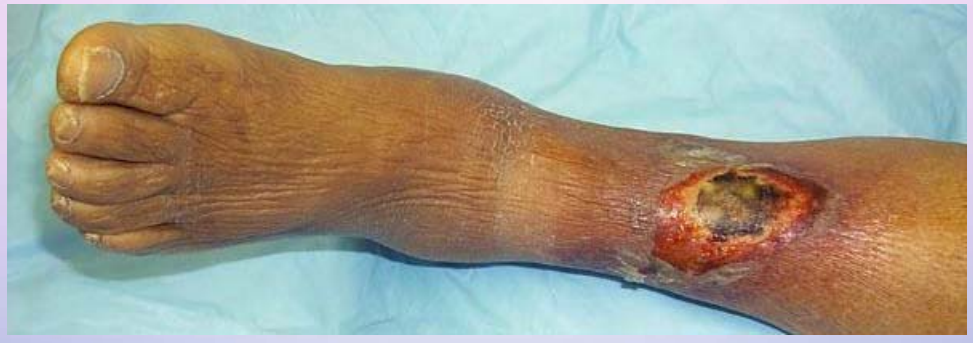


DIAGNOSIS-IMAGING

-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



WHO AM I?

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)

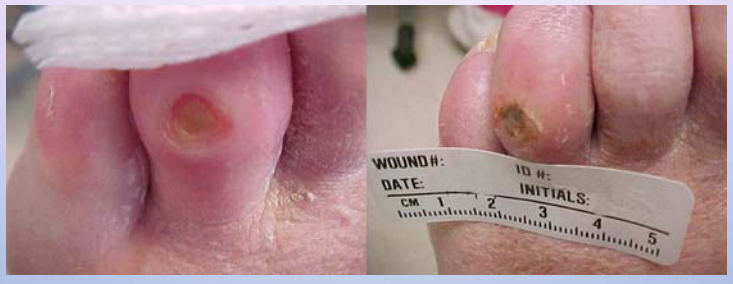
WORK-UP

- 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.

GUESS WHO?


WOUND #:
ID #:
DATE:
INITIALS:
CM 1 2 3 4 5


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

DIABETIC FOOT ULCERS

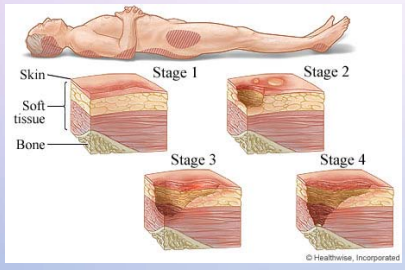
- DEFINITION
  - WOUNDS FROM ILL-FITTING SHOES, ULCERS ON WEIGHT-BEARING AREAS AND PENETRATING INJURIES FROM PUNCTURE WOUNDS OR OTHER TRAUMATIC EVENTS

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.

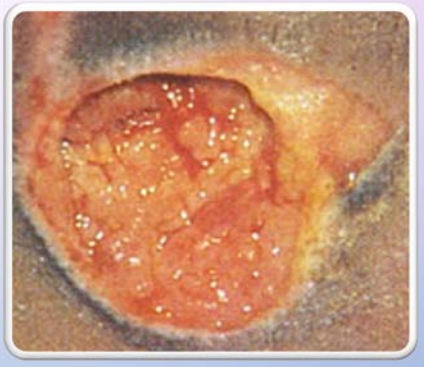
PRESSURE ULCERS

- 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

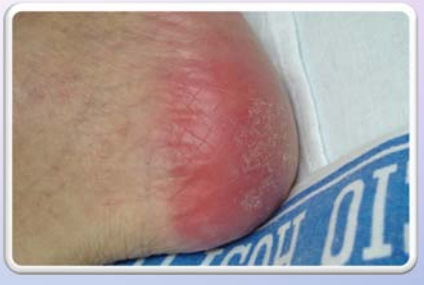


PRESSURE ULCERS

QUIZ TIME



QUIZ



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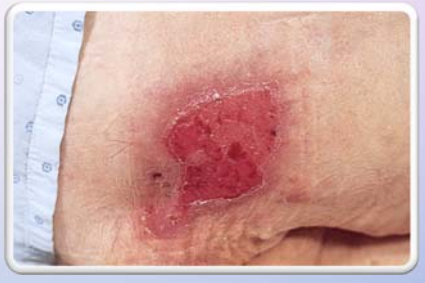

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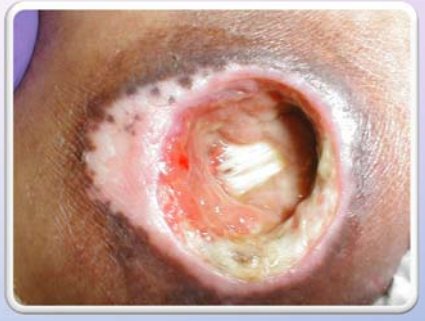

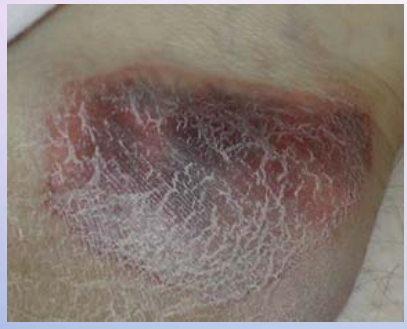

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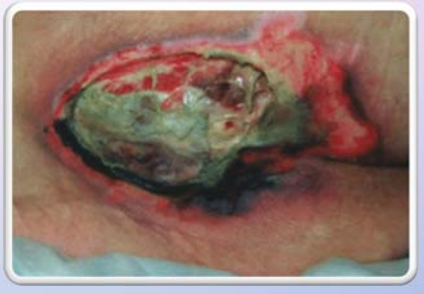
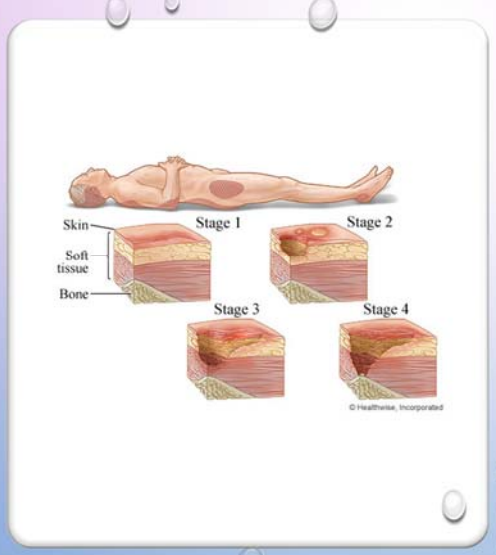


STAGING PRESSURE ULCERS



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

NEGATIVE PRESSURE WOUND THERAPY

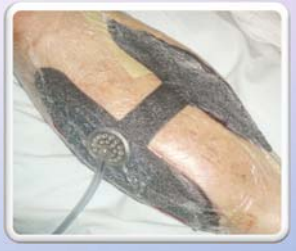
Non-invasive active therapy using localized negative pressure to promote healing

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



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

REFERENCES

https://www.aad.org/public/diseases/scaly-skin/actinic-keratosis

https://emedicine.medscape.com/article/280245-overview

https://emedicine.medscape.com/article/1294801-overview#a4

file:///C:/Users/Laura/Downloads/Benign-Skin-Lesions.pdf

https://emedicine.medscape.com/article/460282-overview

https://acphospitalist.org/archives/2012/02/coverstory.htm

http://en.skin.erasmusnursing.net/content/8-1-surgical-2/8-5-pressure-ulcers/8-5-1-treatment-of-pressure-ulcer-stages/

http://decubitusulcervictims.com/info/stages-of-decubitus-ulcers/stage2-decubitus-ulcer/

http://www.smith-ephew.com/australia/healthcare/treatment-options/treatment-options-for-pressure-ulcers/

https://www.pinterest.co.uk/pin/400398841585273 70/

https://emedicine.medscape.com/article/280245-overview

https://emedicine.medscape.com/article/280245-overview

Baranoski, Sharon. *Wound Care Essentials Third Edition*. Lippincott Williams & Wilkins. 2012