|  |  |  |
| --- | --- | --- |
| SKIN LESION | APPEARANCE | DESCRIPTION |
| Wheal | Red ring around the outside and white in the middle. (Think of a **RED** Steering wheel) | Urticaria, insect bites, some allergic reactions |
| Vesicles | Fluid filled (Think blisters but very small <1cm) | Chicken pox and shingles (Early then they crust over) |
| Bulla | Blister that is BIGGER than a vesicle >1cm | Typical blisters from friction or burns and Pemphigus Vulgaris |
| Pustule | Like a vesicle but filled with pus | Acne |
| Cyst | Fluid or semifluid inside a capsule under the skin | Sebaceous cysts and cystic acne (OUCH!) |
| Impetigo | Honey colored crusty lesions | Bacterial skin infection usually around the mouth, nose and chin |
| Keloid | Raised, indurated and shiny scar | Usually on darker skin tones |

**VIRAL INFECTIONS**

|  |  |  |
| --- | --- | --- |
| **CHICKEN POX** | **SHINGLES (HERPES ZOSTER)** | **HERPES SIMPLEX** |
| Caused by virus called varicella | Caused by exposure to varicella **LATER** in life if you have **HAD** chicken pox in the past | Virus totally different from chicken pox and shingles |
| Can be all over the body | Will only be on ONE side of the body as it follows a nerve path (UNILATERAL RASH) | HSV-1 is “fever blisters”  HSV-2 is genital herpes |
| Lasts 7-14 days | Lasts 7-28 days | Incubation 2 days to 2 weeks  Lesions last 7-14 days |
| Start out as vesicles and then crust over | Pain first THEN vesicles which eventually crust over | Start out as vesicles and then crust over |
| Airborne BEFORE there are vesicles | Airborne | Usually sexual contact |
| Vaccine for Chicken Pox | Vaccine for Shingles | No vaccine for HSV |
| Contagious | Not Contagious | No cure and will typically reoccur many times |
| Usually just topical creams and topical steroids for itching and inflammation | Acyclovir can shorten the course  Analgesics for pain  Steroids for inflammation | Acyclovir can shorten the course, IV, PO or topical WEAR GLOVES  Topical gels to help with pain |
|  |  | Can be FATAL to newborn if mom has active lesions and gives birth vaginally…MUST have C-section |
|  |  | HIGH risk for HIV (open lesions and probably not using barrier method of protection) |

**BACTERIAL INFECTIONS**

|  |  |
| --- | --- |
| **Cellulitis** | Bacterial Infection (usually streptococcus or staphylococcus) so treated with antibiotics  Can be VERY serious  Usually starts with a break in the skin  Deeper layers of the dermis become infected  S/S Redness, Edema, Heat, ⭡WBC, Fever, Malaise  If there is drainage it should be cultured  Usually resolves with proper and prompt treatment in 7-10 days  If not treated can be fatal (SEPSIS)  NOT contagious  Make sure patient knows to COMPLETE the antibiotics even if symptoms have resolved |
| **Impetigo** | Bacterial infection most commonly occurring in children  Usually around the mouth nose and chin but can affect other parts of the body  HIGHLY contagious  S/S starts as flat macules, then vesicles, then honey colored crusty lesions  Diagnosed by culture  Treated with oral and topical antibiotics (Bactroban [mupirocin])  Emphasize keeping clean and dry |

**FUNGAL INFECTIONS**

|  |  |
| --- | --- |
| Tinea Capitus | Ringworm of the scalp  Temporary hair loss occurs  Treated with a **Wood’s Lamp** (UV light) which causes fluorescence of the infected hairs killing the fungus  Oral antifungals  Painful and itchy |
| Tinea Corporis | Ringworm of the body  Looks like a wheal (clear in the center)  Itchy  Topical antifungals |
| Tinea Cruris | Fungal infection in the groin (Jock Itch)  Caused by moisture  Keep area clean and dry  Topical antifungals |
| Tinea Pedis | Fungal infection of the feet (Athlete’s Foot)  Keep clean and dry  Topical antifungals |

**PARASITIC INFECTIONS**

|  |  |
| --- | --- |
| Pediculosis (Lice)  SUPER CONTAGIOUS-teach the nature and transmission of the disease (close contact) but do NOT need to isolate from public | Lice live on blood (will die in 1-2 days without it)  See live lice and ‘nits’ or eggs  Treated with Permethrin or Pyrethrin (RID)  After treatment the lice and eggs must be picked off with a nit comb  Cant be used on children under 2 or pregnant women…must use petroleum jelly instead  All bedding and clothing must be washed in HOT water And dried in DRYER |
| Scabies (Itch Mites)  SUPER CONTAGIOUS-teach the nature and transmission of the disease (close contact) but do NOT need to isolate from public | Burrows under the skin causing **wavy, thread-like lines and itching**  Treated with topical crotamiton (Eurax) or 4-8% solution of sulfur in petroleum jelly  Treat clothing and linens the same as with pediculosis |

Function of the skin

Diagram

Description automatically generated

* Excretion of wastes
* Protection
* Temperature regulation
* Prevention of dehydration

SKIN ASSESSMENT

* Obtain health history
* Assess color (Darker skin tones assess lips mucous membranes esp. for cyanosis)
* “3 T’s” Texture, Turgor, Temperature

PQRST for symptoms

* Pain
* Quality
* Radiation
* Severity
* Time

Contact Dermatitis (Coming into contact with something you are allergic/hypersensitive to)

* Wet dressings with Burow’s solution to promote healing
* Cool wet dressing cause vasoconstriction and relieve itching

Eczema

* Treat with coal tar (avoid sunlight for 72 hours!)

Dermatitis Venenata (poison Ivy)

* Wash area with TONS of water to help itching

SLE (Systemic Lupus Erythematosus)

* Autoimmune disease
* Causes butterfly rash on face, photosensitivity, polyarthralgias and polyarthritis
* Treated with NSAIDS, antimalarials (hydroxychloroquine), steroids
* **Important to BALANCE rest and activity**

Acne Vulgaris

* Occlusion of sebaceous glands
* Treated with antibiotics, topicals, hormone therapy
* Tretenoin and Isotretenoin (Accutane) is TERATOGENIC…female patients must be on oral contraceptive for 1 month before use

SKIN CANCER

* Nevi=Mole
* Get annual skin checks by dermatologist
* AVOID SUN and use PROTECTIVE MEASURES when exposure occurs
* Basal Cell-found in basal layer of epidermis highly curable but often returns
* Squamous Cell-in epidermis, more prone to metastasis so early treatment is needed
* Malignant Melanoma-MOST serious and MOST often to metastasize

Shape

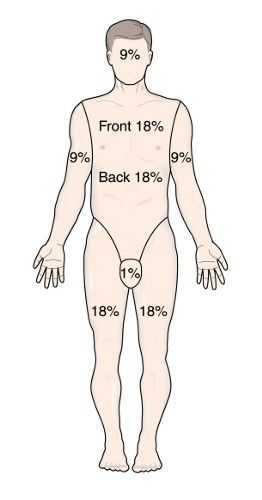
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**BURNS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TYPE/DEGREE |  |  | PROGNOSIS |  |
| THERMAL | Patient came in contact with something HOT i.e.: hot liquid, flame, etc. | Cool the area immediately | Depends on the percentage of the body and severity of the burns | If in a fire, we need to worry about inhalation injuries and carbon monoxide poisoning. CO binds with oxygen receptors on red blood cells making it impossible for O2 to bind so oxygen can’t get circulated throughout the body.  REMEMBER stop, drop, and roll!  CO poisoning causes vomiting, headache and unsteady gait and the lips will have a cherry red color. |
| NON-THERMAL | Caused by electricity, chemicals or radiation | Irrigate or wash with cool water immediately | Depends on cause but electrical burns run the risk of arrythmias and **CARDIAC ARREST** |  |
| FIRST DEGREE | Superficial caused by sunburn or FLASH flame | Dry and red, blanches when pressure applied, no blisters (vesicles or bullae) | Painful |  |
| SECOND DEGREE | Partial thickness caused by hot liquids, direct flame, chemicals, severe sunburn | Vesicles and bullae  Blanches with pressure | Extremely PAINFUL |  |
| THIRD DEGREE | Full Thickness caused by contact with hot liquids or solids, flame, chemicals, electrical contact | Dry leathery ESCHAR, white, charred, dark tan, black or red, you can see charred blood vessels, no blanching, vesicles are rare | Little or no pain (nerve endings have been burned away) |  |

**PATHOPHYSIOLOGY OF BURNS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **STAGE** | **TIME FRAME** | **PATHOPHYSIOLOGY** | **INTERVENTIONS** | **BIGGEST CONCERN** |
| STAGE 1-EMERGENT PHASE | Onset to 72 hours | HYPOVOLEMIA (Fluid Loss)  fluids shift into the interstitial compartment, edema, blood is very thick and the patient is dehydrated  Anuria | 1.Airway  2.IV fluids  3.Bladder catheter  4.NG tube  5.Analgesia  6.Maintain Airway and fluid volume  7.Give TETANUS | **MAJOR CAUSE OF DEATH**  Burn Shock (HYPOVOLEMIC SHOCK) and Renal Failure=hypotension, tachycardia, tachypnea, restlessness, anuria  Smoke Inhalation  CO Poisoning |
| STAGE 2-INTERMEDIATE ACUTE DIURETIC STAGE | Starts at 72 hours and ends when <20% of TBSA remains burned | Fluids start to shift BACK into the vascular compartments at 48-72 hours  Polyuria  FLUID OVERLOAD | 1.proper care of burn wounds  2.promote healing  3.prevent infection  By **debriding** wound we PREVENT infection and PROMOTE healing but it is EXTREMELY painful for the patient | **MAJOR CAUSE OF DEATH**  Infection  Curling’s ulcer-may start vomiting bright red blood 7-14 after burn  Heart and Renal failure |
| STAGE 3-LONG TERM REHABILITATION PHASE | <20% of the TBSA remains burned | Healing continues | **ALL PHASES**: keep the room at 85 degrees to prevent chilling  **Focus here on teaching:**  Wound care  S/S complications  Exercises  Coping Skills and Socialization | Depends on the severity, percentage, body parts involved and what organs were affected |



**RULE of 9’s**

REMEMBER that the numbers get divided by front and back.

EXAMPLE: the front of the arm is only HALF the arm so it would be 9 divided by 2= 4.5%

Legs are 9% on the Front and 9% on the back

Head would be 4.5% on the front and 4.5% on the back

The nurse making the initial assessment of a burned patient in the emergency room observes that the entire right arm (anterior and posterior), right anterior leg, chest, and abdomen are covered with reddened skin and blisters. Using the Rule of Nines, the nurse estimates the percentage of burn to be\_\_\_\_\_\_%.

A: 18

B: 36

C: 54

D: 81

ANSWER: B: 36

PRESSURE ULCERS-MUST BE CAUSED BY PRESSURE

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| STAGE 1 | Non blanchable erythema |  |  |
| STAGE 2 | Shallow open injury, may be shiny or dry WITHOUT slough or eschar |  | Hydrocolloid |
| STAGE 3 | Full thickness tissue loss, subcutaneous layer may be visible |  | Alginates |
| STAGE 4 | Full thickness tissue loss, can see muscle or bone, may have areas of slough and eschar | Osteomyelitis is BIG concern |  |
| UNSTAGEABLE/UNCLASSIFIED | Completely covered in Necrotic Tissue |  |  |

