Users Guide to the Biggest Organ in the Body

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Skin: The Biggest Organ in the Body

- Inflammation (Rash)
- Infection
- Tumors
- Trauma
Consults:

- Hi... I’m calling for a biopsy
- It’s uhh... erythematous, macular papular
- I’ve never seen anything like it
Morphology: Describing Skin Lesions

- Size
- Color
- Primary Lesion
- Secondary Lesion
- Arrangement
- Distribution
Morphology: Describing Skin Lesions

- Size (self explanatory)
- Color
- Primary Lesion
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Morphology: Describing Skin Lesions

- Size
- **Color**
- Primary Lesion
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Color

- Describe the color
- Add any additional descriptive terms (annular, leaf shape, polygonal...
Morphology: Describing Skin Lesions

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Types of Skin Lesions

- **Primary Lesions**: The initial skin lesion before evolution or external alteration
  - Gives the best clue about the underlying etiology
- **Secondary Lesions**: Lesions that have evolved or been altered
Primary Lesions

Cyst
Fissure
Macule
Nodule
Papule
Polyp
Pustule
Vesicle
Wheal
Macule

- Flat, circumscribed skin discoloration <1cm that lacks surface elevation or depression
- Examples of macules include freckles and flat moles

Ephelides (freckles)
Patch

- Flat, circumscribed skin discoloration; a very large macule >1cm

Café-au-lait patch of Neurofibromatosis
Patch

- Flat, circumscribed skin discoloration; a very large macule >1cm

Café-au-lait patch
Papules

- solid, raised lesion
  <0.5 cm in diameter

Basal Cell Carcinoma
Vesicle

- Papule that contains clear fluid

Varicella Zoster Virus (Shingles)
Pustule

- Papule that contains purulent material

Rosacea Fulminans
Plaque

- A plaque is a solid, raised, flat-topped lesion >1 cm in diameter

Plaque Psoriasis
Wheal

- Firm, edematous plaque that is pruritic and lasts <24 hours

Giant Papular Urticaria (Drug Reaction to Amoxicillin)
Nodule

- Elevated skin lesion
  >0.5cm in diameter; a larger and deeper papule

Fibroepithelioma of Pinkus
(Basal Cell Carcinoma Variant)
Bullae

- Localized fluid collection >0.5cm in diameter; Nodule of clear fluid

Bullous Pemphigoid
Cyst

- Nodule that contains semisolid material

Epidermal Inclusion Cyst (Sebaceous Cyst)
Tumor

- A solid mass of the skin or subcutaneous tissue; larger than a nodule

Natural Killer Cell Lymphoma (Non-Hodgkin Lymphoma)
Tumor

Squamous Cell Carcinoma
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Secondary Skin Lesions

- Erosion
- Ulcer
- Scale
- Crust
- Excoriation
- Lichenification
- Atrophy
Erosion

- Lesion that involves loss of the epidermis
Ulcer

- Lesion that involves loss of the epidermis and part of the dermis

Pseudomonas (Ecchyma Gangrenosum)
Scale

- A dry build-up of dead skin cells that often flakes off the surface of the skin

Eczema Craquele’
Crust

- A dried collection of blood, serum, or pus.
  Also called a scab

Erosive Pustular Dermatoses of the Scalp
Impetigo (Strep or Staph)
Excoriation

- A hollow, crusted area caused by scratching or picking at a primary lesion
Prurigo Nodularis
Lichenification

- Rough, thick epidermis with exaggerated skin lines
Nickel Contact Dermatitis
Atrophy

- An area of skin that has become very thin and wrinkled

Topical Steroid Induced Atrophy
Morphology: Describing Skin Lesions

- Size
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- Distribution
Arrangement

Keratoacanthoma

Solitary
Multiple

Steatocystoma Multiplex
Linear IgA Bullous Dermatoses

Annular
Morphology: Describing Skin Lesions

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Varicella Zoster (Shingles)

Dermatomal
Inverse Psoriasis

Intertriginous
Case 1

65 y/o WM with history of a slowly enlarging lesion R preauricular

- Size
- Color
- Primary Lesion
- Secondary Lesion
- Arrangement
- Distribution
Primary Lesions

- Cyst
- Fissure
- Macule
- Nodule
- Papule
- Polyp
- Pustule
- Vesicle
- Wheal
Morphology: Describing Skin Lesions

- Size
- Color
- Primary Lesion
- Secondary Lesion
- Arrangement
- Distribution

- 0.8cm
- Dull red, pearly
- Papule
- Central scale/crust
- Solitary
- Right pre-auricular region
Basal Cell Carcinoma

- Most common type of skin cancer

- Subtypes:
  - Superficial
  - Nodular
  - Morpheaform (infiltrative)
  - Pigmented

- Risk Factors:
  - Sun exposure
  - X-rays
  - BCNS (PTCH gene mutation)

- Px:
  - Locally invasive

- Tx:
  - Surgical excision
  - Topical 5-FU
  - Imiquimod (Aldara)
Case 2

- Size
- Color
- Primary Lesion
- Secondary Lesion
- Arrangement
- Distribution

Right Posterior Calf
Morphology: Describing Skin Lesions

- Size
- Color
- Primary Lesion
- Secondary Lesion
- Arrangement
- Distribution

- 1.5cm
- Brown, tan, erythematos base
- Asymmetric plaque
- Slightly scaly
- Solitary
- Right posterior calf
- Poorly circumscribed
Melanoma

- **Etiology**
  - Carcinoma of melanocytes
- **Clinical (abcde)**
  - Asymmetry
  - Border
  - Color
  - Diameter
  - Evolution

- **Treatment (depth)**
  - Excisional biopsy
  - Staging (labs, imaging)
  - Re-excision with margins ± sentinel lymph node biopsy
  - Chemotherapy (largely ineffective)
  - Sunblock spf 30
  - At least yearly skin exams
Melanoma In-Transit Metastasis
Case 3

42 y/o Cambodian male c/o 3 months progressive skin lesions, airlifted from outside hospital--rule out steven’s johnson syndrome
- Size
- Color
- Primary Lesion
- Secondary Lesion
- Arrangement
- Distribution
Morphology: Describing Skin Lesions

- Size
  - 4cm
- Color
  - Milky white
- Primary lesion
  - Fluid filled flaccid bullae
  - Multiple wide spread, erythematous erosions with serum crust
- Secondary lesion
  - Rare intact bullae
  - Photodistributed

- Arrangement
- Distribution
Pemphigus Vulgaris

Dermatologic Emergency

- **Etiology**
  - Antibody to desmoglein
  - Destroys intercellular keratinocyte adhesions
- **Clinical**
  - Flaccid bullae
  - Widespread erosions
  - Secondary lesions often in greater number than primary lesions because easily traumatized
  - Absoe-Hansen sign (+)
  - Nikolsky sign (+)
  - Oral lesions common, may cause airway compromise
- **Onset** 40-60 y/o
- **Dx**
  - Skin biopsy
  - Serology
- **Tx**
  - Systemic immunosuppression
    - Prednisone 1mg/kg/d
    - Steroid sparing agents (cellcept, immuran)
  - Treat any secondary infection
- **Px**
  - Waxes and wanes lifelong
  - 50% mortality rate
The End