Skin

• Largest organ
  – Barrier against irritants, toxins, organisms
  – Moisture barrier
  – Heat, pain, touch and pressure sensors
• Skin disorders can be a symptom of systemic disease
• Skin disorders or injury can cause a systemic disease
Dermatology Tool Box

- Dermatology resource-book, cards, on-line
- Good penlight or flashlight
- Ruler

Recommended:
www.visualdx.com/learn
derm
5 interactive lessons

Morphology of lesions

- Primary or secondary
- Why is terminology important?
  - Develop differential diagnosis
  - Document changes
  - Communicate with other professionals

Primary lesions

<table>
<thead>
<tr>
<th>&lt;1cm</th>
<th>&gt;1cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macule</td>
<td>flat</td>
</tr>
<tr>
<td>Papule</td>
<td>raised</td>
</tr>
<tr>
<td>Vesicle</td>
<td>fluid filled</td>
</tr>
<tr>
<td>Nodule</td>
<td>firm</td>
</tr>
</tbody>
</table>
Primary lesions

- Macule
- Patch

Secondary lesions

- Atrophy
- Crust
- Desquamation
- Eczematous
- Erosion
- Excoriation

- Fissure
- Hyperkeratotic
- Lichenified
- Indurated
- Scale
- Umbilicated
Pattern

- Acral
- Annular
- Confluent
- Discrete
- Follicular
- Linear
- Livedo/reticulate
- Hypopigmented
- Hyperpigmented
- Petechiae
- Purpura
- Telangiectasia
- Morbilliform
- Papulosquamous
- Photodistribution

History

- Previous infections or major illnesses
- Exposure to infection, irritants
- Allergies
- Travel
- Meds- Rx, OTC, home remedies
- Keeping you awake at night

History-OLDCART

- Onset
- Location (where did it start, spread to)
- Duration (has it changed in any way)
- Character (pain, tender, itchy)
- Aggravating/associated factors
- Relieving factors
- Temporal factors- severity, meds, txs, etc.
Diagnosis

I. Fluid filled
   A. Clear
   B. Pustular

I. Solid, non-red
II. Solid, red
   A. Non-scaling
   B. Scaling
      1. Papulosquamous
      2. Eczematous

I. A. - Fluid filled- clear

Clear- vesicobullous diseases
   • Vesicular diseases (small):
     – Herpes simplex
     – Varicella zoster
     – Tines pedis
     – Dermatitis herpetiformis
   • Bullous diseases (large)
     – Pemphigus vulgaris
     – Stevens-Johnson syndrome
     – Poison ivy-type contact dermatitis
     – Bullous impetigo

I. B. - Fluid filled - pustular

Pustular diseases
   • Acne vulgaris
   • Rosacea
   • Bacterial or fungal folliculitis
   • Candidiasis
II. - Solid, non-red

- **Flesh/skin colored papules** - wart, actinic keratosis, corns and calluses, basal or squamous cell cancer, cysts
- **White lesions** - vitiligo, tinea versicolor, milia, molluscum
- **Brown-black color** - freckles, melanoma, seborrheic keratosis, dermatofibromas, nevi
- **Yellow color** - xanthelasma, necrobiosis lipoidica, actinic keratosis

III. A.- Solid, red, non-scaling

**Dome shaped:**
- Papules - insect bites, cherry angiomas
- Nodules - furuncles, epidermoid cysts, hidradenitis

**Flat topped** - vascular reaction (wheal, hive)
- Transient - urticaria and angioedema
- Persistent - erythema multiforme or nodosum
- Purpuric erythemas - vasculitis

III. B.- Solid, red, scaling

**Papulosquamous** - No epithelial disruption
- Sharply marginated
- Can have eczema if the person is scratching it

**Eczematous** - Epithelial disruption
- Erosions, weeping, crusts, fissures, yellow scale
- Poorly marginated
- Lichenification
III. B. - Solid, red, scaling

Papulosquamous
• Plaque formation:
  – Psoriasis
  – Tinea
  – Lupus
  – Mycosis fungoides
• Nonconfluent papules:
  – Pityriasis rosea
  – Lichen planus
  – Secondary syphilis

III. B. - Solid, red, scaling

Eczematous
• Lot of excoriation
  – Atopic dermatitis
  – Stasis dermatitis
  – Scabies
• Little excoriation
  – Seborrheic dermatitis
  – Irritant or allergic contact dermatitis
• Eczematous reaction pattern

Treatment-Topicals

<table>
<thead>
<tr>
<th>Vehicles</th>
<th>Potency</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ointment</td>
<td>strong</td>
<td>hydrating</td>
</tr>
<tr>
<td>Cream</td>
<td>moderate</td>
<td>some hydration</td>
</tr>
<tr>
<td>Gel</td>
<td>strong</td>
<td>drying</td>
</tr>
<tr>
<td>Lotion/soln</td>
<td>low</td>
<td>drying</td>
</tr>
<tr>
<td>Powders</td>
<td></td>
<td>(used to dry, intact skin)</td>
</tr>
</tbody>
</table>
## What to use where

- **Ointments** - non-intertriginous, thick areas
- **Creams** - anywhere
- **Gels** - oral, scalp, very hairy skin sites
- **Lotions/soln** - scalp, ears, hairy sites, intertriginous areas
- **Powders** - intact intertriginous sites

## To dry wet lesions

- **Wet dressings or compresses** - inflammation suppression, debride, drying
- **Wet the gauze and wring it out so that it is not running nor just damp**
- **Place it on the affected area for 20-30 minutes 3-4 times/day** - usually not longer than 3 days
- **Stop applications when weeping stops or will get cracking and fissures**
- **Don’t cover with a towel or plastic** - inhibits evaporation, promotes maceration, potential bacterial growth
- **Burrow’s solution**, **Domeboro** (aluminum acetate)

## Topical steroids

- **Potency** goes from **High(1)** to **Low(7)**
  - **Super-high potency** (I) - halobetasol, clobetasol, betamethasone dipropionate
  - **High potency** (II, III) - fluocinonide, mometasone, amcinonide
  - **Mid potency** (IV, V) - betamethasone valerate, fluticasone, triamcinolone, fluocinolone
  - **Low potency** (VI, VII) - hydrocortisone, desonide, dexamethasone, aclometasone
Clinical indications

- Atopic dermatitis
- Psoriasis
- Bechet’s
- Patch stage MF
- Peristomal dermatoses
- Lichen planus
- Granuloma annulare
- Acne keloidalis
- Lichen sclerosis
- Seborrheic dermatitis
- Bullous
- Dermatoses
- Pyoderma gangrenosum
- Alopecia areata
- Vitiligo

Pruritus

- Common causes
  - Old age
  - Cholestasis; jaundice
  - Hematologic/oncologic disorders
  - Renal failure
  - Neuropathy
  - Primary skin disorder

Pruritus- Non-pharmacologic treatment

- Cool environment
- Tepid showers, baths
- Avoid spicy foods or alcohol
- Stress reduction
- Keep nails short
Pruritus - Pharmacologic treatment

**Topical**
- Menthol or phenol formulations
- Antihistamine creams
- Topical anesthetics
- Capsaicin 0.025%
- Topical corticosteroids

**Systemic**
- H1 blockers
- H2 blockers
- Others - doxepin (Sinequan), ondansetron (Zofran), Paroxetine (Paxil), mirtazapine (Remeron), sertraline (Zoloft), gabapentin (Neurontin)

Dermatologic Emergencies
- Stevens-Johnson Syndrome (SJS) and Toxic Epidermal Necrolysis (TEN)
- Necrotizing fasciitis
- Staph and Strep TSS
- Drug reaction with eosinophilia and systemic symptoms syndrome (DRESS)
- Child abuse
References

- Bobonich, M. A., “Pathophysiology and Morphology of Lesions,” presented on September 30, 2011 by the American Academy of Nurse Practitioners, Indianapolis, IN
- Short, T., “Management of Pruritus” in Short Talks on Palliative Care, Midwest Palliative & Hospice Care Center Vol. 2, No. 6, June 2012

Resources

- Dermatology Nurses Association
- Nurse Practitioner Society of the Dermatology Nurses Association
- American Academy of Dermatology
- American Cancer Society
- Centers for Disease Control
- Dermnet
- National Institutes of Health

Questions