EMERGENCY DERMATOLOGY 1.0

JIM GILLEN MD FACEP
WHY DID YOU GO INTO EMERGENCY MEDICINE?
AHMET DONMEZER

COWBOY
KANT SHAH

THE LADIES
CHARLOTTE AND JOSH

PRIVATE TIME
JASON WILSON

PRESIDENT OF THE UNITED STATES
WHY EMERGENCY MEDICINE?

MAKE A DIFFERENCE
ABCDE

• A $\rightarrow$ ASYMMETRIC
• B $\rightarrow$ BORDER
• C $\rightarrow$ COLOR
• D $\rightarrow$ DIAMETER (>> PENCIL ERASER)
• E $\rightarrow$ EVOLVING
Goals and Objectives

• Goals
  • Understand the presentations of various dermatologic diseases seen in the ED
  • Differentiate benign and life threatening dermatologic diseases

• Objectives
  • Recognize and identify the common skin lesions presenting to the ED
  • Learn the treatment of common and life threatening dermatologic diseases
Macules, Papules, Nodules and Vesico-Bullous Lesions

- Greater than 3,000 Skin Diseases
- ~5% of ED visits in the USA

- History
  - a. Age
  - b. Duration
  - c. Associated symptoms
    - i. Itching
    - ii. Fever
History (continued)

• iii. Pain
• d. Travel/Location
• e. Sick Contacts
• f. Past Medical History
• g. Medications – new
• h. Menstrual history
• i. Sexual history
• j. Vaccinations
Nodule

• A palpable solid lesion > 5 or 10 mm in diameter, that may of may NOT be elevated
• Small lipomas, epidermoid/sebaceous cysts, erythemanodosum, lymphomas, fibromas, various neoplasms
• Large Nodules ➔ >>20 mm are called tumors, whether benign or malignant
Macule

- Circumscribed area of change without elevation
- A flat discolored spot of varied size and shape
- PATCH ➔ macule of > 10 mm
- Examples are freckles, flat moles, part-wine stains, tatoos and the rashes of
- Rickettsial infections, rubella and rubeola
Papule

• Solid elevated lesion usually < 10 mm in diameter
• PLAQUE: a group of confluent papules
• Diseases starting with Papules
• Warts, psoriasis, syphilis, lichen planus, drug eruptions, pigmented moles, seborrhea and actinic keratoses
• Some phases of acne and epitheliomas
Vesicle

- A circumscribed elevated lesion < 5 mm in diameter that contains serous fluid
- BULLA aka Blister → are just vesicles > 5 mm
- Primarily caused by primary irritant or allergic contact dermatitis
- Trauma, sunburn, insect bites, viral infections such as hsv and zoster, drug eruptions, pemphigus, dermatitis herpetiformis, pemiphigoid
Pustule

• A superficial, elevated lesion containing pus

• Pustules may result from infection OR the “seropurulent evolution of a vesicle or bullae”

• Impetigo, acne, furuncles, abscesses, chancroid, deep fungal infections, hidradenitis suppurativa, kerion and psoriasis of the palms and soles
Wheal

- “A transient elevated lesion caused by local edema”
- Wheal are a common allergic reaction
- Drug eruptions, insect bites or stings, sensitivity to cold, heat, pressure or sunlight
Telangectasias

• “Dilition of superficial blood vessels”

• May be seen in certain systemic diseases

• Ataxia Telangectasia and Scleroderma

• Topical fluorinated corticosteroids

• Often unknown etiology or old age
JEOPARDY
ALGORITHM ERYTHEMATOUS RASH

ERYTHEMATOUS RASH

NIKOLSKY'S SIGN

YES

FEBRILE
Staph SSS (child)
TEN (adult)

AFEBRILE

NO

AFEBRILE

Toxic Shock (mucous membranes)
Kawasaki Syndrome (child, hands)
Scarlet Fever (sand paper)

AFEBRILE

Anaphylaxis
Scombroid
Alcohol Flush
ALGORITHM MACULOPAPULAR RASH

MACULOPAPULAR RASH

CENTRAL DISTRIBUTION

FEVER / ILL?

YES

Viral Exanthem
Lyme Disease
(erythema migrans)

NO

Drug Reaction
Pityriasis
(herald patch)

TARGET LESIONS

YES

Stevens-Johnson
TEN
Erythema Multiforme

NO

Meningococcemia
Rocky Mountain
Spotted Fever
Syphilis
Lyme Disease
(erythema migrans)

PERIPHERAL DISTRIBUTION

FEVER / ILL?

YES

LESION DISTRIBUTION

NO

FLEXO

EXTENSOR

Scabies
Eczema
Psoriasis
ALGORITHM VESICULO-BULLOUS RASH

VESICULO-BULLOUS RASH

FEBRILE

DIFFUSE DISTRIBUTION
Varicella / Chicken Pox
Small Pox
Disseminated GC
Purpurpa Fulminans / DIC

LOCALIZED DISTRIBUTION
Necrotizing Fasciitis
Hand Foot Mouth

AFEBRILE

DIFFUSE DISTRIBUTION
Bullous Pemphigus
Pemphigus Vulgaris

LOCALIZED DISTRIBUTION
Contact Dermatitis
Herpes Zoster
Dyshidrotic Eczema
Burns
ALGORITHM PETECHIAL/PURPURIC RASH

PETECHIAL / PURPURIC RASH

FEBRILE & TOXIC

PALPABLE
- Meningococcemia
- Disseminated GC
- Endocarditis
- RMSF
- HSP

NOT PALPABLE
- Purpura Fulminans / DIC
- TTP

AFEVRILE & NON-TOXIC

PALPABLE
- Cutaneous Vasculitis

NOT PALPABLE
- ITP
MRS TECK

- M  Meningoccemia
- R  RMSF
- S  Syphilis, Scarlet Fever
- T  TSS
- E  Erythema Multiforme
- C  Coxsacki (H-F-M)
- K  Kawasacki’s
<table>
<thead>
<tr>
<th>THE VERY YOUNG</th>
<th>THE VERY OLD</th>
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<tbody>
<tr>
<td>Staph SSS, Kawasaki's disease, viral exanthem, meningococcemia</td>
<td>pemphigus vulgaris, sepsis, TEN, SJS</td>
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<thead>
<tr>
<th>TOXIC</th>
<th>IMMUNOSUPPRESSED</th>
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<tbody>
<tr>
<td>necrotizing fasciitis, meningococcemia, TEN, SJS, TSS, RMSF, TTP</td>
<td>necrotizing fasciitis, meningococcemia, endocarditis, herpes zoster, sepsis</td>
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<tr>
<th>DIFFUSE ERYTHEMA</th>
<th>PETECHIAE / PURPURA</th>
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<tbody>
<tr>
<td>staph SSS, staph TSS, strep TSS, TEN</td>
<td>meningococcemia, endocarditis, TTP, ITP vasculitis, DIC, RMSF</td>
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<th>MUCOSAL LESIONS</th>
<th>HYPOTENSION</th>
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<td>EM major, TEN, SJS, pemphigus vulgaris</td>
<td>meningococcemia, TTP, TSS, RMSF, TEN, SJS</td>
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**TEN** = toxic epidermal necrolysis; **SJS** = Stevens-Johnson Syndrome, **TSS** = toxic shock syndrome, **RMSF** = Rocky Mountain spotted fever, **SSS** = scalded skin syndrome, **DIC** = disseminated intravascular coagulopathy, **EM** = erythema multiforme, **TTP** = thrombotic thrombocytopenic purpura