AAD Boards Blitz 2018

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Disclosures

• No relevant conflicts of interest

You see a patient for the neck rash pictured. Which patient are you most likely seeing?

A B C D

Diseases with Elastosis Perforans Serpiginosa
“RTAP MOPEDS”
R Rothmund-
T Thomson
A Acrogeria
P Pseudoxanthoma Elasticum
M Marfan
O Osteogenesis Imperfecta
P Penicillamine (disrupts elastin crosslinks)
E Ehlers-Danlos
D Down (#1 cause)
S Scleroderma
Down Syndrome
- Elastosis perforans serpiginosa
- Syringomas (20%)
- Milia-like calcinosis cutis (hands)
- Cutis marmorata
- Vitiligo
- Atopic eczema
- Xerosis
- Hyperkeratosis (keratosis pilaris)
- Macroglossia
- Lingua plicata
- Cheilitis

Progeria
- Progeria (Hutchinson-Gilford)
  - AD; lamin A mutation, a nuclear envelope protein
- Premature aging
- Thin, sclerodermoid skin

Anhidrotic Ectodermal Dysplasia
- XLR variant (M.C. type)
  - mutation in ectodysplasin-A (EDA)
- Hyperhidrosis
- Sparse hair
- Peg-shaped teeth
- Characteristic facies

Noonan Syndrome
- AD; PTPN11 mutation (allelic with LEOPARD)
- Skin:
  - Lower extremity lymphedema
  - Multiple large nevi; QLAMs
  - Cutis verticis gyrata
  - Webbed neck
- Characteristic facies:
  - Hypertelorism, low-set ears
- CV (50-80%):
  - Pulmonic valve stenosis
- Normal life span if cardiac defects are treated

Which of the following drugs is most likely to exacerbate dermatitis herpetiformis in a patient treated with dapsone?
- Trimethoprim
- Probenecid
- Folic acid
- Dapsone
- Ketoconazole

A common cause of burn wound infections, this bacteria may also be introduced into wounds by medical leeches.
- Aeromonas hydrophila
- Mycoplasma pneumoniae
- Staphylococcus aureus
- Vibrio vulnificus
- Edwardsiella lineata
Vibrio vulnificus
- Fish pathogen, especially tropics popular in aquaculture for fish
- Causes hand cellulitis in fish handlers
- High mortality for bacteraemic and hepatic infection
- May be misidentified as Streptococcus by automated lab systems
- Treant: β-lactam

Edwardsiella lineata
- Gas avirulent
- Larval lesions cause sebathur's eruption
- Treant: self-limited

Mycoplasma phocacerebrale
- Seal pathogen
- Painful, swollen, stiff, erythematous finger
- In: seal's LAD
- Progresses from cellulitis to joint destruction
- Treant: tetracycline

Which of the following systemic antibiotics causes orange skin discoloration?

a) Rifampin
b) Streptomycin
c) Clavulanic acid
**d) Clofazimine**
e) Aztreonam

Which of the following topical combinations causes orange skin discoloration?

a) Avobenzone + DEET
b) Minoxidil + Propylene glycol
c) Dapsone + Benzoyl Peroxide
**d) Polymyxin B + Ozenoxacin**
e) Crisaborole + Triamcinolone

Which of the following drugs should be taken with orange juice?

a) Griseofulvin
b) Rifampin
**c) Itraconazole**
d) Cyclosporine
e) Vemurafenib

A 32 y.o. baker presents to your clinic with this itchy rash, which has been present for 8 months. You perform a skin scraping, revealing the following microscopic finding. What is the cause of the rash?

a) Sarcoptes scabiei
b) Acarus seu
**c) Cheyletiella spp.**
d) Trombicula alfredudesi
e) Dermatophagoides

Picture Icarus, the winged boy (Acarus) wearing a bakers hat (baker's itch) with a red rash on his hands.

A 35 y.o. woman presents with for evaluation of these skin-colored nodules developing over the past 18 months. After performing a skin biopsy, which of the following is the most appropriate follow-up study?

- Abdominal MRI
- Echocardiogram
- Head & Neck contrast CT
- Complete Metabolic Panel
- Urinalysis

Past Medical Hx
- Diabetes Mellitus
- Hypertension
- Hyperlipidemia

Past Surgical Hx
- Tonsillectomy at age 10
- Hysterectomy 3 years ago

Leiomyoma

Baker’s itch
- *Acarus siro* (flour mite)
- Also hay, grain, house dust

Mimolette cheese
Hereditary Leiomyomatosis and Renal Cell Cancer (Reed Syndrome)

- AD: Fumarate hydratase deficiency (FH)
- Multiple cutaneous and uterine leiomyomas
  - Both are painful
  - Onset in late 20s; usually hysterectomy by early 30s
- Renal cell cancer
- Management
  - Calcium channel blockers to ↓ pain associated with smooth muscle spasm
  - Annual contrast MRI of kidneys beginning age 10

This plant, a permanent fixture in the Simpson household, was named for its ability to cause intense laryngeal edema with oral exposure. This is because it contains a high concentration of what irritant?

a) Tuliposidase A
b) Urushiol
c) Sesquiterpene lactones
d) Calcium oxalate

e) Calcium oxalate

A gardener presents to you with a 1 week history of a painful rash on her hands. She reports that she has been busy pruning Poinsettias in preparation for the holiday season. The rash due to this plant is caused by the presence of what compound in the plant’s latex?

a) Phorbol esters
b) Thiosinamates
c) Capsaicin
d) Bromelain
e) Calcium oxalate
Thiocyanates
Bromelain
Capsaicin
Calcium oxalate

Activates TRP receptor

Phorbol Esters
Euphorbiaceae (Spurge Family)

Crotalaria
Cordyceps
Croton Plant
Codiaeum variegatum
Cactus-like
Spurges
Poinsettia
Euphorbia pulcherrima

Euphorbiaceae (Spurge Family)

Ingenol mebutate
Euphorbia peplus

Will it GLOW?

Picture a poinsettia
with "Four ball S turd" (phorbol esters)

Vitiligo

Fluorescence under Wood’s lamp is d/t accumulation of pteridines
– 6-biopterin = blue
– 7-biopterin = yellow/green

Vitiligo
Pityriasis alba

Will it GLOW?
Will it GLOW?

Tinea Capitis

Microsporum canis
Trichophyton tonsurans

Ectothrix (fluorescent)
“Cats And Dogs Fight and Growl Sometimes”
- M. canis
- M. audouinii
- M. distortum
- M. ferrugineum
- M. gypseum
- T. schoenleinii

Endothrix
“TVs in the house”
- T. tonsurans
- T. schoenleinii
- T. violaceum

Will it GLOW?

Tinea Capitis

- Fluorescence = Microsporum
  - Use griseofulvin
  - High failure rate with terbinafine
- No fluorescence = Trichophyton
  - Use griseofulvin or terbinafine

Erythropoetic Protoporphyria
Porphyria Cutanea Tarda
Normal

Will it GLOW?

Gin & Tonic
Rum & Coke
• Tonic water contains quinine

A patient presents with these scaly violaceous acral plaques. A skin biopsy shows necrolytic acral erythema.

With which of the following conditions is necrolytic acral erythema most closely associated?

a) Essential Fatty Acid Deficiency
b) Hepatitis C infection
c) Pellagra
d) Zinc deficiency
e) Glucagonoma

Necrolytic migratory erythema

• Associated with a glucagon-secreting pancreatic islet cell tumor
• Clinically and histologically resembles zinc deficiency
  – Periungual, linear, and acral
  – Annular erythematous plaques involving the dorsal feet and fingers
• Most have systemic involvement at the time of presentation
  – Hyperglycemia, diarrhea, anemia, weight loss, glossitis, and angular cheilitis
• Treatment: remove tumor

Necrolytic acral erythema

• Presents with painful or pruritic, keratotic, well-demarcated plaques in the dorsal feet
• Caused by Hepatitis C
• Other diseases assoc. w/ Hep C
  – Necrolytic Acral Erythema
  – Lipoid Proteinosis
  – Periungual epidermolysis
  – Type I cryoglobulinemia (40% have hep C)
• Small vessel vasculitis
• Urticarial vasculitis
• Urticaria
• Pruritus
• Erythema nodosum

Zygomycosis/Mucormycosis

• Rhizopus, Mucor, Absidia
• Acute rapid, fatal infection
• Catarrhal: Noninflammatory retiform purpura
• Rhinocerebral: Subtle unilateral facial swelling and slight erythema. Rapidly progresses to large areas of necrosis
  – Assoc. with diabetes
• Also pulmonary, GI, disseminated forms
• Path: angioinvasive, non-ize, non-vascular hyphae with 90 degree branching

A 62 y.o. female is admitted to the ICU after being found unresponsive in a local park. She is well known to the hospital, with frequent recurring admissions for diabetic ketoacidosis and drug and alcohol intoxication. She has a long history of substance abuse, including alcoholic liver disease and she is a known cocaine user.

You are consulted to evaluate a necrotic lesion on her face. You perform a detailed skin examination which reveals no extrafacial lesions, and then you biopsy the violaceous edge adjacent to the area of necrosis. Your findings are depicted.

Which of the following is the greatest risk factor for the patient's current skin findings?

a) Paracoccidiomycosis
b) Acrhutia

c) Congenital, nonvascular septal defect
d) Diabetes

Blood glucose 611
Blood pH 6.9
WBC 6.1
Hgb 11.1
Plt 230
Urinalysis + glucose, + ketones

Mucormycosis

• Rhizopus, Mucor, Absidia
• Acute rapid, fatal infection
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Levamisole vasculitis

- Levamisole = veterinary anti-helminth
- Common adulterant in cocaine
- Clinical: necrotic plaques. Loves the ears
- p-ANCA (90%), c-ANCA (50%)
- Path: vasculitis

Thank You

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