Cases from the Crescent City

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Conflict of interest:

I have nothing to disclose

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1. Which patient is most likely to have psoriasis?
• The answer is E.
• Photo A shows longitudinal erythronychia and was in a patient with suspected Darier’s disease.
• Photo B shows sclerosis of the nail fold in a patient with systemic sclerosis.
• Photo C shows splinter hemorrhage which can be present in psoriasis but is not specific for psoriasis.
• Photo D shows nail dystrophy in a patient with a digital mucous cyst.
• Photo E shows distal onycholysis and nail pitting which are diagnostic for psoriasis.
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- What is your diagnosis?
  a. Brachyonychia
  b. Onychauxis
  c. Onychomadesis
  d. Onychoschizia
  e. Trachyonychia
The answer is Onychomadesis.
Beau lines are transverse depressions on the back aspect of the nail plates.
Onychomadesis involves the complete separation and possible subsequent shedding of the nail plate and represents a more severe form of Beau lines.
   – Brachyonychia are racket nails or short nails, in which the width of the nail plate and nail bed is greater than the length.
   – Onychauxis is overgrowth and thickening of the nail plate.
   – Onychoschizia is plate-like splitting of the free edge of the nail.
   – Trachyonychia are longitudinal striations with a sandpaper appearance.

Onychomadesis

Post viral (HFMD), other infection, fever, systemic, nutritional, medication, SJS

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- This 64-year-old patient presents to clinic with a rash that involves the trunk and extremities.
- Consider the appearance of her nails.
- Which diagnosis will likely be found on histopathology?

a. Alternating orthoparakeratosis and parakeratosis
b. Full thickness epidermal necrosis
c. Lichenoid band of lymphocytes
d. Neutrophils in the stratum corneum
e. Subacute spongiotic dermatitis
• The answer is C, Lichenoid band of lymphocytes.
• This nail finding is pterygium and longitudinal ridging which are found in lichen planus.
  – Option A is consistent with pityriasis rubra pilaris
  – Option B is consistent with stevens Johnson syndrome
  – Option D is consistent with psoriasis
  – Option E is consistent with various types of eczematous dermatitides

• Photo: Hutchison's Clinical Methods: An Integrated Approach to Clinical Practice, 2012;15, 333-347
This 46-year-old female is seen as a new patient for 1 year of hair loss and hair thinning in the right frontal hairline. The clinical and dermatoscopy photos of the scalp are shown. What is your diagnosis?
This 46-year-old female is seen as a new patient for 1 year of hair loss and hair thinning in the right frontal hairline.

The clinical and dermatoscopy photos of the scalp are shown.

What is your diagnosis?

a. Central centrifugal cicatricial alopecia
b. Frontal fibrosing alopecia
c. Tinea capitis
d. Traction alopecia
e. Trichotillomania
• The answer is traction alopecia.
• Traction alopecia due to tight hairstyles is common in African American women.
• Dermatoscopy is very helpful to establish if the hairstyle is still causing traction as it shows hair casts around the hair shafts at the periphery of the patches.
• These appear as cylindric structures that envelop the proximal portion of the hair shaft.
  – Central centrifugal cicatricial alopecia shows reduced hair density with hair shaft variability, pinpoint white dots, and peripilar white halos
  – Frontal fibrosing alopecia can show absence of follicular openings, cicatricial white patches, peripilar casts, blue-gray dots, and perifollicular erythema.
  – Tinea capitis can produce comma hairs or corkscrew hairs.
  – Trichotillomania can show black dots, yellow dots and broken hairs.

• Miteva M et al. Hair and scalp dermatoscopy Journal of the American Academy of Dermatology, 2012; 67 (5): 1040-1048,
• What is the most likely diagnosis?
  a. Alopecia areata
  b. Discoid lupus
  c. Psoriasis
  d. Trichotillomania
  e. Secondary syphilis
• The answer is secondary syphilis.
• Temporary patchy alopecia can be associated with secondary syphilis.
• The “moth-eaten” pattern is the most common type and is considered to be a pathognomonic manifestation of secondary syphilis.
• The frequency of hair loss in secondary syphilis ranges from 2.9% to 7%.
• The precise pathogenesis is unknown.
• The alopecia usually resolves after 3 months after therapy.
  – Syphilitic alopecia can mimic alopecia areata both clinically and histopathologically.
    • Exclamation point hairs are present in alopecia areata but not in syphilis.
  – Trichotillomania can also present with several irregular patches, but there would be fewer patches than in this patient.
  – Discoid lesions in the scalp present as erythematous to violaceous plaques with scarring and depigmentation.
  – Scalp psoriasis can present with alopecia but will be associated with plaques with silvery scale.

This 56-year-old female complains of a patch of hair loss in the posterior scalp. Clinical and trichoscopy photos are shown above. What is your diagnosis?

A. Alopecia areata  
B. Androgenetic alopecia  
C. Lichen planopilaris  
D. Tinea capitis  
E. Trichotillomania
• The answer is A. **alopecia areata**.
• The most characteristic trichoscopic features according to a recent review of alopecia areata are:
  – yellow dots (63-94% of patients),
  – black dots (44-70%),
  – exclamation mark hairs (30-44%),
  – tapered hairs (12-42%),
  – broken hairs (45-58%),
  – vellus hairs (33-72%),

Alopecia Areata
• What is your diagnosis?
  a. Allergic contact dermatitis
  b. Alopecia areata
  c. Frontal fibrosing alopecia
  d. Psoriasis
  e. Seborrheic dermatitis
• The answer is C, frontal fibrosing alopecia.
• This patient has biopsy proven frontal fibrosing alopecia.
• Frontal fibrosing alopecia is associated with:
  — progressive hair loss along the anterior hairline
  — significant perifollicular erythema and scale.
• A recent report highlighted the depression of the frontal veins as a new clinical sign of frontal fibrosing alopecia.

• Louisiana Dermatological Society Meeting November 15 2015
You are evaluating a 56 year old female for this patch of alopecia in the frontal scalp. Biopsy is consistent with lichen planopilaris. The patient mentions other symptoms that are suggestive of Graham-Little-Piccardi-Lassueur Syndrome. Which areas of the body should you examine to determine if this is the correct diagnosis?

A. Axilla and eyebrows
B. Axilla and groin
C. Eyebrows and eyelashes
D. Eyebrows and groin
E. Forearms and groin
• The answer is B. Axilla and groin.
• Graham-Little-Piccardi-Lassueur Syndrome (GLPLS) is a variant of lichen planopilaris, associated with non-cicatricial alopecia of the axilla and groin.
• Pull test often reveals anagen hairs in GLPLS.
• It is more common in women, especially post-menopausal women.

9. Which hair shaft abnormality associated with this condition?
Which hair shaft abnormality associated with this condition?

A. Pili torti
B. Pili trianguli et canaliculi
C. Trichorrhexis nodosa
D. Trichoschisis
E. Trichothiodystrophy
• The answer is pili trianguli et canaliculi which occurs in uncombable hair syndrome.
• Known as spun glass hair, rare abnormality of the hair shaft
• This disorder does not have increased hair fragility.
• The patients have course dry frizzy hair that develops in the first year of life.

• Louisiana Dermatological Society Meeting, New Orleans April 16, 2016
Uncombable Hair Syndrome

triangular or heart–shaped cross-section and longitudinal grooves along the shaft

10. A 28 year old female is evaluated in clinic for pruritic bumps in the bilateral axilla as shown above. What type of previous treatment did this patient likely receive in the past?
A 28 year old female is evaluated in clinic for pruritic bumps in the bilateral axilla as shown above. What type of previous treatment did this patient likely receive in the past?

A. Alexandrite laser
B. Botulinum toxin injection
C. Intralesional triamcinolone injection
D. ND:Yag laser
E. Microwave thermolysis of eccrine glands
10.

• The correct answer is A, Alexandrite laser.
• Fox Fordyce like disease has been reported following laser hair removal using the Alexandrite (755nm), intense pulsed light (810-945nm) and the Diode laser (800nm).
• Fox Fordyce disease or apocrine miliaria is characterized by multiple smooth skin colored to yellow dome shaped papules.
• These lasers may induce damage to the follicular infundibulum which leads to altered keratinocytes forming a keratin plug.
  • Tetzlaff MT et al. Arch Dermatol - May 2011; 147(5); 573-6
  • Yazganoğlu, K. et al. Journal of the American Academy of Dermatology, 2012-10-01, Volume 67, Issue 4, Pages e139-e140
Polycystic ovarian syndrome is associated with:

a. Alopecia areata
b. Clitoromegaly
c. Endometrial cancer
d. Galactorrhea
e. Type I diabetes mellitus
• The answer is C endometrial cancer.
• Chronic anovulation in patients with PCOS predisposes patients to infertility and endometrial cancer.
• The 3 main components are:
  - Hyperandrogenism
  - oligo- or anovulation
  - polycystic ovaries

• Other important features include insulin resistance, obesity, cardiovascular disease, obstructive sleep apnea, nonalcoholic steatohepatitis, and psychiatric disease.

• Cutaneous manifestations of polycystic ovary syndrome include signs of insulin resistance, such as:
  – acanthosis nigricans,
  – and signs of hyperandrogenism, such as hirsutism, acne, and hair loss.

12.

- 12. A 45-year-old African American female is evaluated for facial redness. She has no history of photosensitivity, joint pains or oral ulcers. ANA is performed and is negative. Punch biopsy from the cheek shows perivascular and perifollicular infiltrates. Which additional histopathologic finding would suggest rosacea?
12. A 45-year-old African American female is evaluated for facial redness. She has no history of photosensitivity, joint pains or oral ulcers. ANA is performed and is negative. Punch biopsy from the cheek shows perivascular and perifollicular infiltrates. Which additional histopathologic finding would suggest rosacea?

A. Demodex infestation  
B. Follicular plugging  
C. Mucin in the dermis  
D. Necrotic epidermal keratinocytes  
E. Perineural lymphocytic infiltrate
12.

- The best answer is A Demodex infestation.
- In a recent comparative analysis of the histopathology of rosacea and cutaneous lupus, demodex infestation was predictive of rosacea, whereas follicular plugging, perineural lymphocytic infiltrate were predictive of lupus erythematosus.
- Abundant mucin deposition was also more prominent in cases of lupus.
- Necrotic epidermal keratinocytes can be found in both rosacea and lupus, but overall more common in lupus.
  - Brown et al. JAAD. Volume 7, No. 1, July 2014 pages 100-107
• Which bacterium, cultured from a *Demodex folliculorum* mite, has been implicated in rosacea pathogenesis?
  a. Bacillus oleronius
  b. Chlamydophilia pneumonia
  c. Helicobacter pylori
  d. Propionibacterium acnes
  e. Staphylococcus aureus
13

• The answer is A, Bacillus oleronius.
• Several microorganisms have been shown to be increased or immunoreactive in patients with rosacea.
• Microbes that have been associated with rosacea include Demodex folliculorum, B. oleronius, S. epidermidis, H. pylori, and C. pneumonia.
• B oleronius is a non-commensal organism that was initially cultured from the hindgut of a termite, and later isolated from 1 Demodex mite in a patient with rosacea and in several patients with blepharitis.
• Proteins from B. oleronius were found to trigger a reaction in a statistically significant amount of rosacea patients compared to controls.

• Jarmuda et al. Correlation between serum reactivity to Demodex-associated Bacillus oleronius proteins, and altered serum levels, and Demodex populations in erythematotelangeliectatic rosacea patients. J Med Microbiol. 2014. 63: 258-62
• 50-year-old male is evaluated for facial flushing that is worse with anxiety, bending forward, and physical exertion. He admits to having occasional headaches, and diaphoresis. What is the next best test?

A. Abdominal CT
B. Calcitonin level
C. IgE level
D. Urine 5-hydroxyindoleoacetic acid
E. Vasoactive intestinal peptide
14.

- The answer is urine 5-hydroxyindoleoacetic acid
- You should consider ruling out mastocytosis, carcinoid, and pheochromocytoma as a cause.

- Louisiana Dermatological Society Meeting September 13, 2015
Which type of gloves should be recommended for this orthopedic surgeon who is allergic to thiurams and carbamates?

a. Neoprene
b. Nitrile
c. Rubber
d. Styrene
e. Vinyl
• The answer is vinyl gloves.
• Both thiurams and carbamates are rubber accelerators.
• Many articles currently used in the healthcare sector contain rubber chemicals (e.g. syringes, tracheal tubing, elastic bands, catheters) that can sensitize workers.
  
  – Rubber gloves = rubber accelerators.
  – Neoprene, nitrile, and styrene gloves = rubber and rubber accelerators.

• Photo: www.wsiat.on.ca
• Which occupation has the largest proportion of individuals reporting water exposure >2 hours per day?
  a. Hairdressers
  b. Lab technicians
  c. Midwives
  d. Plant cultivators
  e. Registered nurses
• The answer is hairdressers.
• In a recent survey study of over 34,000 people in Sweden, the occupations with the highest proportion of individuals with >2 hours of water exposure were:
  – kitchen assistants,
  – cleaners,
  – restaurant workers and
  – hairdressers.

This 48-year-old female was admitted to the orthopedic service after elective arthrodesis of the right wrist. Following the procedure the wound was dressed with xeroform gauze, cotton gauze and cast padding. Approximately 24 hours after the procedure she was noted to have erythema and tense vesicle formation on the right dorsal hand with worsened to spread to the wrist and fingers. Aerobic cultures are negative. What is the diagnosis?
The most likely diagnosis is:

A. Allergic contact dermatitis
B. Bullous impetigo
C. Bullous pemphigoid
D. Eczema herpeticum
E. Erythema multiforme
• The answer is A. allergic contact dermatitis- likely to topical antiseptic or topical agent such as xeroform gauze that was placed on the hand.
• Most surgical related allergens are not tested on the TRUE test.
• Acrylates are the most commonly used surgical adhesive but not tested for using the TRUE test.
• Colophony is the only adhesive tested.
• Surgical antiseptics allergies also cannot be tested for using the TRUE test.

• Louisiana Dermatological Society Meeting November 15 2015
18. A 67 year old female presents to the clinic for a 4 day history of a rash on bilateral forearms. She admits to gardening 5 days prior. What is the most likely plant growing in her garden?

A. Avocado
B. Fig
C. Mango
D. Peach
E. Strawberry
18.

• The correct answer is B Fig.
  — This patient has a phytophotodermatitis to fig.
  — The fig (ficus carica) belongs to the Moraceae family.
  — In the leaf sap and shoot sap there are 2 types of furocoumarins – 8 methoxypsoralens and 5-methoxypsoralens.
  — Kiwi and Avocado are latex cross reactors.
  — Peach and Strawberry are not a cause of phytophotodermatitis.
  — Polat et al. Phytophotodermatitis due to Ficus carica. Dermatology Online Journal 14 (12): 9
Phytophotodermatitis

Fig - leaves, branches and skin of fruit have furocoumarins (flesh of fruit does not)

Not all exposures are accidental – Fig is sometimes used intentionally as a folk remedy for dermatologic condition

A decotion of boiled down fig leaves is used to soak skin for treatment of common skin disorders, including onychomycosis

Son JH et al. Five Cases of Phytophotodermatitis Caused by Fig Leaves and Relevant Literature Review. Ann Dermatol. 2017 (29); 86-90.
Phytophotodermatitis

- Most common plants are Apiacea/Umbelliferae (celery, carrot or parsley family) and Rutaceae (citrus) family
- More prevalent in summer with increased UVA exposure and plant exposure
- Lesions present 24 hours after exposure and peak at 48-72 hours
- Lesions often blister and cause hyperpigmentation that persists

Safran T et al. Blistering phytodermatitis of the hands after contact with lime juice. Contact Dermatitis. 2017 Jun; 77(1): 53-54
Phytophotodermatitis
Phytophotodermatitis

- Cow parsnip (hogweed, wild celery, “pushkie”)
- Alaska, Canada as far south as Georgia
- Produces furocoumarins to protect against fungal attack which absorb photons and add release energy to the skin –
- More furocoumarin exposure to skin with high humidity, perspiration and wet skin
- Can cause “puskkie burns”
- Can occur after as little as 10 minutes of summer sunlight (UVA)

19. This patient most likely has a contact allergy to:
19 This patient most likely has a contact allergy to:

A. Benzalkonium chloride
B. Diazolidinyl urea
C. Methyl methacrylate
D. Paraben mix
E. Potassium dichromate
19.

- The correct answer is E, potassium dichromate.
- Potassium dichromate is found in leather footwear, cement, and wood finishes.
- In this case, the patient was allergic to leather present in sandals.
- Benzalkalonium chloride is a preservative used in ophthalmic solutions.
- Methyl methacrylate is an adhesive used in artificial nails, dental fillings, and artificial joints.
- Paraben mix is used in cosmetics, topical medications, and antiperspirants.

A 36-year-old female presents with a pruritic rash on her hands and anterior thighs that you suspect is a contact dermatitis.

While you are talking to the patient in clinic, you notice that she is holding an iPad with a case that looks like this.

If this iPad case is the cause of her allergic contact dermatitis, what is the most likely allergen?

a. Benzophenones  
b. Dimethyl fumarate  
c. Methylisothiazolinone  
d. Mixed dialkyl thioureas  
e. Nickel
• The answer is mixed dialykl thioureas which are an allergen in neoprene, which is the main component of this type of soft protective case.

• Neoprene is a special synthetic rubber used in many products (eg, wet suits, elastic supports, gloves, shoes, and orthopedic devices).

A previously healthy 12-month-old female has a 2-day history of diffuse rash and mild facial edema. It began initially on the face then spread to the trunk and extremities. Individual lesions are present for less than 24 hours. The patient had recently been prescribed Amoxicillin for the treatment of otitis media 10 days ago, which was discontinued 2 days ago. The patient has had no fevers, chills, arthralgias or other systemic symptoms. On physical exam there are no vesicles or bullae present, no mucosal involvement. The patient’s rash completely resolves with oral antihistamines.
The most likely diagnosis is:
A. Acute hemorrhagic edema of infancy
B. Erythema multiforme
C. Juvenile idiopathic arthritis
D. Muckle-Wells syndrome
E. Urticaria multiforme
The diagnosis is E. urticaria multiforme.

Urticaria multiforme presents in otherwise healthy children ages 4 months to 4 years with recent viral infections.

Diagnostic criteria are:

① annular or polycyclic lesions with transient ecchymotic skin changes
② duration of lesions less than 24 hours
③ facial or acral edema
④ dermatographism
⑤ elevated acute phase reactants
⑥ favorable response to antihistamines.


Louisiana Dermatological Society Meeting November 15 2015
Urticaria Multiforme

• Reserve corticosteroids for worst cases
• Differentiate from
  – EM (no targets, blistering, necrosis, mucous mem.)
  – serum-sickness like reactions (fever, LA, arthralgias, urticaria and angioedema)
• Preceding history of
  – URI,
  – bacterial infection
  – Abx - amoxicillin, cephalosporin, macrolides
  – Vaccination

This premie, 6 days s/p PDA repair began to have erythematous desquamating patches with a positive Nikolsky sign first involving her intertriginous areas.
The toxin produced in this condition interferes with function of:
A. BP antigen-1
B. Desmoglein 1
C. Plakoglobin
D. Collagen VII
E. Langerhans cells
Staph Scalded Skin Syndrome

The answer is B – desmoglein 1
The condition shown represent staph scalded skin syndrome
Most often caused by staph aureus phage group II, producing ETA and EFB
Toxins cleave desmoglein 1, destruction of cell-cell adhesion with blistering and denuded skin (stratum granulosum)
Represents 5% of staph aureus isolates
Prodrome of irritability, malaise and fever
Positive Nikolsky’s sign
Erythematous tender patches developing over a hours, may have bullae
Epidermal detachment face, axillae, groin and neck leaving moist, red surface
Heals without scarring
More common in children less than 5 years old – possibly because children don’t have protective antibodies or kidneys do not excrete toxin

Staph Scalded Skin Syndrome

Treat with supportive measures – NG feedings, IV fluids, IV antibiotics

Start antibiotics as early as possible
Search for source of infection: Blood, wounds, ocular exudates and nasopharynx

Re-epithelialize within 6-12 days – no scarring

Staph Scalded Skin Syndrome Adults

Mortality- 40-63 % in adults

Unlike pediatric patients, adult patients generally
immunocompromised
chronic renal disease
HIV infection
GVHD
chemotherapy patients
IVDA
DM

Presentation similar with fever, generalized erythema, bullae, desquamation
Adult source may be more clear; blood cxs more likely positive

Must be differentiated from TEN – get biopsy
no necrotic keratinocytes in SSSS
both lack inflammation
more superficial in SSSS – below stratum corneum

Staph Scalded Skin Syndrome

- Has been reported and studied in a similar premature infant
- Concern for transmission in NICU or similar health care location – in this study the NICU had 4 cases with horizontal transmission
- In this study, Anti-ETA antibody levels were lower in 4 cases with SSSS but also lower in preterm infants compared to healthy full-term infants
- Plasma IgG levels correlate with gestational age possibly more concerning for premature infants

This skin eruption is most commonly caused by:

a. Beta lactam antibiotics
b. Macrolide antibiotics
c. Non-steroidal anti-inflammatory drugs
d. Protease inhibitors
e. TNF-alpha inhibitors
• The answer is A, beta-lactam antibiotics, which include penicillins, aminopenicillins, and cephalosporins.
• The diagnosis is Acute general exanthematous pustulosis (AGEP), which is an acute febrile drug eruption of small primarily non-follicular sterile pustules, arising within a large area of edematous erythema.
• More than 90% are due to beta-lactam antibiotics.
• In this case, the patient was HIV positive and on a new antiviral agent containing emtricitabine and tenofovir.

• Louisiana Dermatologic Society Meeting. September 12, 2015
AGEP

- Typically within 48 hours from exposure to reaction onset
- Antibiotics with a median of 24 hours
- Other medications include: sulfonamide, terbinafine, hydroxychloroquine, diltiazem and fluconazole
- Typically includes fever and elevated neutrophil count
- Differential diagnosis:
  - Bacterial folliculitis
  - Generalized pustular psoriasis
  - DRESS
  - SJS

AGEP

• Treatment includes discontinuation of medication and monitoring for systemic involvement and bacterial superinfection
• Up to 20% systemic involvement
  – Hepatic (hepatocellular or cholestatic), renal and pulmonary insufficiency
• Less than 5 % mortality (usually multi-organ dysfunction, DIC, greatest risk with co-morbidities, diffuse or mucous membrane involvement)
• Potent topical steroids correlated with reduced duration of hospitalization
• Unclear evidence that systemic corticosteroids reduce disease duration
• Lesions usually last 1-2 weeks after removal of the offending drug and then desquamate.
A 44-year-old male with history of end stage renal disease developed a small painful ulcer that rapidly increased in size over the past 4 weeks. The best next step is:

a. Skin biopsy for H&E and culture
b. Skin swab for culture
c. Lower extremity Doppler study
d. Unna boot dressing
e. Referral to wound care
• The answer is A, skin biopsy for H& E and cultures.
• In this case the biopsy revealed calciphylaxis.
• The best next step is to perform a skin biopsy prior to initiating any definitive therapy (telescoping biopsy from lesion margin or deep incisional wedge give best yield)
• Calciphylaxis clinically presents with severe painful skin lesions
  – (livedo reticularis, reticulate purpura, violaceous plaques, or indurated nodules)
  – that demonstrate poor healing and are frequently complicated by blistering and ulcerations with superimposed infections.
• Ulcerated lesions commonly demonstrate black eschar.
• Calciphylaxis predominantly affects patients with chronic kidney failure treated by dialysis.

Calciphylaxis

However, calciphylaxis is not limited to patients treated by dialysis and also occurs in patients with normal kidney function and those with earlier stages of chronic kidney disease.

One year mortality 45-80%

Obesity reported as risk factor for proximal calciphylaxis (thigh, buttocks, trunk)

Been reported in patients with autoimmune conditions
  - SLE
  - Anti-phospholipid antibody
  - RA

Hypercoagability may predispose
Hepatitis (infectious, autoimmune and alcoholic) risk factor

Calciphylaxis

• Other risks:
  - Calcium supplements
  - calcium-based phosphate binders
  - active Vitamin D
  - warfarin
  - corticosteroids
  - iron therapy
  - trauma also associated

Calciphylaxis
Treatment for uremic calciphylaxis

Wound management – get wound care involved
Surgical debridement case by case, accomplished surgeon
Hyperbaric oxygen if available
Antibiotics as guided by systemic features
Pain management (fentanyl over morphine due to potential hypotension
Sodium thiosulfate – IV, end of dialysis, also IL parathyroidectomy in refractory hyperparathyroidism
Management of other risk factors

warfarin-associated calciphylaxis

18 patients – 15 from literature and 3 from UCSF

Autoimmune diseases not prominent in cases (few ANA, few APA)

tends to ulcerate below knee

Presents on average 32 months after initiation (warfarin skin necrosis presents 3-10 days)

No calcium imbalance
Sodium thiosulfate and bisphonates seemed to help these patients
Lower mortality in this study 17% (uremic 50-80%)

26. 

- A 44 year old female complains of painful blisters to the forearms as well as subjective fever, malaise, and sore throat for the past 5 days. Yesterday, she was evaluated by an Urgent Care physician and diagnosed with Streptococcal pharyngitis.
- Complete blood count is normal.
- Pregnancy test is negative.
- Biopsy of the one of the blisters shows diffuse neutrophils.
- Direct immunofluorescence is negative.
- What is the treatment of choice?
26. A 44 year old female complains of painful blisters to the forearms as well as subjective fever, malaise, and sore throat for the past 5 days. Yesterday, she was evaluated by an Urgent Care physician and diagnosed with Streptococcal pharyngitis. Complete blood count is normal. Pregnancy test is negative. Biopsy of the one of the blisters shows diffuse neutrophils. Direct immunofluorescence is negative. What is the treatment of choice?

A. Clofazimine
B. Cyclosporine
C. Interferon
D. Metronidazole
E. Prednisone
The correct answer is E Prednisone.
The patient has Sweet’s syndrome secondary to Strep pyogenes infection.
Other causes are malignancy associated, infections, inflammatory bowel disease and medications.
Corticosteroid therapy is the standard treatment and usually results in rapid relief of the systemic symptoms and skin lesions.
Clofazimine, Cyclosporine, Interferon, and Metronidazole have all be reported to be effective in Sweet’s syndrome, however they are not the first line therapy
27. Which of the following laboratory values will likely be abnormal?
A 55-year-old female patient, status post-bariatric surgery, is admitted for multiple enterocutaneous fistulae. She reports worsening of her facial dermatitis. Which of the following laboratory values will likely be abnormal?

A. Aldolase  
B. Alkaline phosphatase  
C. Anti-nuclear antibodies  
D. Calcium  
E. Creatine kinase
• The answer is alkaline phosphatase, which is low in patients with zinc deficiency.
• Zinc is an essential trace element for this enzyme.
• Acquired zinc deficiency: alcoholics, malabsorption, inflammatory bowel disease, gastrointestinal surgery, anorexia nervosa, and AIDS.
• Erythema, scale-crusts and erosions → perioral, acral and perineal areas
• Other presentations: alopecia, paronychia, onychodystrophy, blepharitis, conjunctivitis, stomatitis and angular cheilitis.

• Bariatric patients have high rate of micronutrient deficiencies, pre and post-operatively (1/2 deficient in zinc before)
• Other micronutrients deficiencies are also seen:
  – Thiamine, Folate, B12, iron and copper
• Post-surgically, less absorptive surface area (most absorption is in duodenum and proximal jejunum – competitive absorption with copper)
• Supplements give 1 mg copper for every 8-15 mg of zinc
• Greatest risk for zinc deficiency is with Roux en Y
• Over 300 proteins and 1000 transcription factors incorporate zinc at active sites and DNA binding sites

• Most symptomatic post bypass zinc deficient patients respond to oral zinc supplementation within 4 weeks (220 mg of zinc sulfate)

• Post bariatric surgery, more common after Roux-en Y, though other procedures done more commonly now, Roux-en Y is still done for greatest BMI patients