Disclosures

- I have nothing to disclose

Objectives

- Understand clinical features of common challenging diagnostic dilemmas
- Gain familiarity with the diagnostic tests and HPI features to aid in the diagnosis
- Enhance knowledge of treatments for clinically challenging conditions
Participation is Required

Not Just Requested!

Topics

- The Round Things
- The Brown Things
- The Red Stuff
- The Light Stuff
- The Bumps

The Round Things
Tinea and GA photos

• Dermatophyte infections of the skin, hair or nails
  – Named by location on body
• Typically in children under age 7
• Live in soil, on animals or humans
• Diagnosis
  – Wood's Lamp
  – KOH
  – Fungal Culture
Tinea Treatment

- Depends on location
- Scalp (T. capitis)
  - Systemic
- Face (T. faciei)
  - Topical (consider systemic)
- Body (corporis, manuum, pedis, cruris)
  - Topical
- Nails
  - Topicals (*or systemics)

Topicals

- Topical
  - Clotrimazole
  - Terbinafine
  - Econazole
  - Ketoconazole

- Pearls:
  - Nystatin ineffective
  - Treatments typically 2 – 4 weeks, BID
Systemics

- Griseofulvin
  - Microsize: 20 to 25 mg/kg/day divided BID
  - Ultramicrosize: 10 to 15 mg/kg/day
  - 8 + weeks
- Terbinafine
  - <20 kg: 62.5 mg daily x 6 weeks
  - 20 – 40 kg: 187.5 mg daily x 6 weeks
  - > 40 mg: 250 mg daily x 6 weeks
- Others:
  - Itraconazole
  - Fluconazole

Granuloma Annulare

- Inflammatory Condition of the Skin
  - Etiology unknown
  - Not infectious
  - Typically self-limited
- Symptoms
  - Typically none
  - Occasionally pruritic
GA Treatments

• Self-resolving in months to years
• No satisfactory treatment
  – Topical steroids
  – Intraleisonal steroids
  – Cryotherapy
Nummular Dermatitis

- Coin-shaped lesions
  - 1 cm or more in size
- Tends to be more recalcitrant
  - Requires potent topical steroids
  - Can become super-infected
Serum Sickness Like Reaction

- Typically seen in younger children
- 1-3 weeks after exposure to antibiotics
  - Classic: cefaclor
  - Penicillins, tetracyclines, sulfa, macrolides
- Sometimes occurs w/o medication

SSLR Findings

- Large urticarial plaques
  - Violaceous or lilac color (centrally)
- Swelling of hands, feet, knees
  - With arthralgias
- Fever
- Malaise
Treatment

• Self-limiting Condition
  – 2 to 3 weeks after discontinuation/resolution

• Scheduled antihistamines
  – Cetirizine daily
  – Hydroxyzine in afternoon and evening

• Severe cases
  – Short prednisone taper
Erythema Multiforme (EM)

• Self-limiting hypersensitivity reaction
• Hallmark is the “targetoid lesion”
  – Has concentric rings
• 20% of cases in children
• Causes
  – HSV most common (50%)
  – EBV, varicella

Erythema Multiforme Features

• 1 to 4 weeks after event, develop abruptly
• Lesions are symmetrically distributed
  – Fixed
  – Palms and soles most common sites
• Dull red > dusky macule > sharply marginated wheal > +/- bullae
• Can be itchy
• Oral lesions in up to 50% of children
  – Only mucosal site
• Systemic symptoms typically mild
**EM Treatment**

- Most heal in 2 to 3 weeks w/o treatment
- Oral antihistamines
- If related to HSV flare:
  - Acyclovir or valacyclovir
- If outbreaks recur:
  - Oral acyclovir 20 mg/kg/day for 6 – 12 months
  - Episodic treatment not as helpful

**Stevens-Johnson Syndrome (SJS)**

- Hypersensitivity disorder
  - On spectrum with toxic epidermal necrolysis (TEN)
  - Formerly called EM major
- Seen more frequently in children than TEN
- 1-3 per million per year
- Skin and mucosal involvement
  - Potentially fatal
SJS Clinical Features

• Prodrome of fever, URI symptoms, painful skin, dysphagia.
  – 1 to 3 days before cutaneous signs

• Skin lesions:
  – Started as pink macules > dusky red or purpuric > gray > then vesicles/bulla > irregular erosions
  – Appears on trunk and spreads to arms, neck, face
  – + Nikolsky sign
  – May take hours to a few days
  – <10% BSA

SJS Clinical Features (cont.)

• Mucosal Lesions (present in 90%):
  • Painful erosions that coalesce
  • Lips, mouth, throat, esophagus
  • Nose
  • Eyes
  • Genitalia

• Other features
  • Lymphadenopathy
  • Hepatitis
  • Cytopenias
Triggers

- SJS in children is typically infectious
  - Mycoplasma is most likely trigger
- Others
  - Neoplasia
  - Autoimmune disorders
  - Meds (more common for TEN)

Offending Agents

- >100 medications have been reported
- Allopurinol
- Antibiotics (sulfa*, penicillins, tetracyclines, quinolones, cephalosporins)
- NSAIDs
- Anticonvulsants (carbamazepine, lamotrigine, phenytoin)
- Antiretrovirals (especially NNRTIs)
- Barbituates
**Treatment**

- Stop offending agent(s)
- Treat like patients with severe burns
  - Fluids/electrolytes
  - Caloric replacement
  - Protect from secondary infections
  - Ophthalmology consult
  - Urology consult
  - Mouth care
  - Consider biologic dressings for skin

**Systemic Treatment**

- No treatment to date has show efficacy in prospective clinical trials
- Case reports and small uncontrolled series
- Recent meta analysis showed IVIG + steroid accelerated improvement
- Intravenous immunoglobulins (IVIG)
  - > 2g/kg total dose, over 3 to 4 days
- Systemic immunosuppressives
  - Cyclosporine
  - Cyclophosphamide
  - TNF-alpha antagonists
  - Plasmapheresis
  - Steroids

**The Brown Things**
The Brown Things

Café-au-lait macules

- Common tan oval/round lesion in children
  - Up to 33% of children
  - > 1 is common in pigmented skin
- Typically present at birth or soon after
- Can be round or geographic
- Harmless
CALs – Associations to Consider

- Neurofibromatosis
- McCune-Albright syndrome
- Russell-Silver Syndrome
- Multiple lentigines/LEOPARD syndrome
Neurofibromatosis 1 Criteria

- Must have two or more of the following
  - Six CALs > 0.5 cm before puberty and >1.5 cm in adults
  - Freckling of axillary or inguinal areas (Crowe’s sign)
  - 1 plexiform neurofibroma OR 2+ neurofibromas
  - Two or more Lisch nodules
  - Optic nerve glioma
  - Skeletal dysplasia
  - 1st degree relative

Nevus Spilus

- Solitary, flat, brown patch of melanization
  - Studded with smaller dark brown macules
- Relatively common
- Noticed in infancy, childhood or later
- Can mimic a café-au-lait macule
- Range in size from 1 to 20 cm
Nevus Spilus

- Darker components have potential for malignant transformation
  - Risk is low
- Monitor like other melanocytic nevi
- Nevus spilus typically occurs in isolation
The Red Stuff

The Red Stuff

The Red Stuff
**Seborrheic Dermatitis**

- Self-limiting erythematous/scaly eruption
- Most common in infants and adolescents
- Predilection for areas of high sebaceous gland density
- Infants – hormones
- Adolescents – Malassezia furfur

**Seborrheic Dermatitis**

- Infants
  - Peak incidence is at 3 months
  - Starts as scaly dermatitis of scalp (cradle cap)
  - Can progress to
    - Scalp, neck, ears, face, axillae, groin
    - Chest, back
- Typically not itchy
- Atopic dermatitis overlap occurs
**Seborrheic Dermatitis Treatment**

- Scalp
  - Mineral oil, baby oil
  - Comb out flakes
  - Shampoo (tear-free or anti-dandruff)
- Topical steroids
  - Low-potency (hydrocortisone, desonide, triamcinolone 0.025%, fluocinolone)
  - Ointment or oil vehicle

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**Seborrheic Dermatitis**

- Children/adolescents
  - Scalp and face more common
- Treatment
  - Antidandruff shampoo
    - Selenium sulfide, zinc pyrithione
    - Salicylic acid, coal tar shampoo
    - Ketoconazole shampoo
  - Antifungal topicals (ketoconazole)
  - Topical steroids or calcinuerin inhibitors

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**Superinfected Seb Derm**

- Overlap with intertrigo
- Can be seen in infants in groin, axillae, neck
- Happens with uncontrolled erythema and inflammation > skin breakdown
Treatment

- Culture is helpful
  - Topical vs. oral antibiotics
    - (cephalexin, clindamycin for oral)
  - Antifungal (if candida)
    - Nystatin, clotrimazole
- Once healed, use topical steroids to reduce inflammation

The Light Stuff
Vitiligo

• Acquired form of patterned loss of pigment
• Autoantibodies target melanocytes
• Affects 1% of the population
  – Occurs at any age
  – Young adults most affected
• Mean pediatric age is 6 years
Vitiligo

- Associated with other autoimmunity
  - Thyroid disease
  - Alopecia areata
- Increased frequency of autoimmunity in family
Features of Vitiligo

• Hypopigmentation then depigmentation
• Can affect any area
  – May be symmetric or asymmetric
• Halo nevi
• Leukotrichia (poliosis) of hair

• Course is variable
  – Complete repigmentation is not common

Vitiligo Treatment

• Potent topical steroids
• Calcineurin inhibitors
• Ultraviolet light
  – Narrow-band UVB (NBUVB)
  – Psoralen + UVA (PUVA)
• Surgical
  – Skin grafting
• Cover-up
Pityriasis Alba

• Common, low-grade form of eczema
• Characterized by hypopigmented patches
  – Face, neck, trunk and extremities
• Most noticeable on darker skin
  – Also after sun exposure
**Pityriasis Alba Treatment**

- Mild topical steroids/calcineurin inhibitors for 2 to 3 weeks
  - Hydrocortisone, desonide, fluocinolone
  - Tacrolimus, pimecrolimus
- Strict sun protection
- Liberal use of moisturizing cream

**The Bumps**
**Acrochordons (Skin Tags)**

- Benign pedunculated skin papules
- Often seen in patients who are obese
- In areas of friction
  - Axillae
  - Groin
  - Neck
- Seen with acanthosis nigricans
  - Insulin resistance

**Acrochordon Treatment**

- Do not need to be treated
- May be removed with sharp scissors
  - Typically not covered by insurance
Accessory Tragus

- Fleshy papules near ears or neck
- May or may not contain cartilage
- Solitary or multifocal
- Typically isolated defect
  - Can be associated with branchial arch syndromes
Accessory Tragus Considerations

- Can be associated with:
  - Hearing defects
  - Genitourinary defects
- GU defects somewhat controversial
- Risk is likely low in absence of other defects

Accessory Tragus Treatment

- Can be removed/excised
- If there is a firm papule underneath (cartilage)
  - Refer to otolaryngology
Basal Cell Nevus Syndrome

• AKA Gorlin Syndrome
• Autosomal dominant inheritance
  – PTCH gene
  – Transmembrane protein that inhibits Smoothened
• Incidence – 1 in 50,000 to 150,000

Clinical Findings

• BCC’s of skin
• Odontogenic keratocysts (seen in 75% of patients)
  – Typically occur at a young age
• Rib and vertebrae anomalies (bifid ribs)
• Calcification of falx cerebri
• Kyphoscoliosis
• Frontal and temporoparietal bossing
  – Hypertelorism & mandibular prognathism

Basal Cell Nevus Syndrome

• BCC’s are often mistakenly diagnosed as melanocytic nevi
  – Many are brown
• BCC’s can look like skin tags
• BCC’s tend to develop around puberty
Treatment

- Mostly symptomatic
  - Enucleation of odontogenic keratocysts
  - Removal of BCCs
  - Vismodegib
    - Can help decrease size and need for surgical treatment
    - Everybody has side effects

The Eyebrow Bump

Dermoid Cyst

- Developmental epithelium-lined cyst
- Most common site
  - Lateral orbital ridge
- 3% are midline
  - Potential for deep extension and CNS communication
Dermoid Cyst Treatment

- Surgical Excision
  - If larger, fixed, or growing rapidly – consider excision sooner
- If midline
  - MRI or CT to evaluate for underlying tract or CNS connection
Thank You!

• Thanks to my colleagues for photographs:
  – Beth Drolet
  – Dawn Siegel
  – Kristen Holland
  – Yvonne Chiu

Questions?

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