Red, Flakey, Itchy and Crusty – It’s Time for Photo Rounds
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Rob Danoff, DO, MS, FACOFP, FAAFP

Disclosure

- No conflicts of interest to disclose
- The presentation will not involve discussion of products for investigational use

This Happened After The Fever Went Away
Fast Facts
- Occurs throughout the year
- Most commonly affects children 6 months to 2 years
- The peak age 7 to 13 months
- 90% of cases occur in the first 2 years of life
- Affects males and females equally
- Incubation period is 5 to 15 days
- Children remain alert and are usually not ill appearing

What’s the Diagnosis?
Clinical Manifestations
- The fast-rising fever can trigger febrile seizures (in about 10%-15%) of young children with this virus
- A blanching maculopapular rash appears as fever disappears and lasts 1 to 2 days
- Cough
- Coryza
- Eyelid edema has been noted
- Lymphadenopathy

Roseola
- Etiology
  - Major cause appears to be human herpesvirus 6 (HHV6)
  - Human herpesvirus 7 (HHV7) may also play a role
Roseola

**Diagnosis**
- Clinical
- History very important (telltale rash)
- Can check blood test

**Treatment**
- Supportive care

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**The Three “R’s”**

- Rubeola – ordinary measles
- Rubella – German measles
- Roseola Infantum – exanthem subitum

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**How to tell the difference between Rubella, Measles, and Roseola rashes**

<table>
<thead>
<tr>
<th>Rubella</th>
<th>Measles</th>
<th>Roseola</th>
</tr>
</thead>
<tbody>
<tr>
<td>- rash appears after mild fever (99-100°F)</td>
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<td>- starts on face and moves down the body</td>
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<td>- pink or light red spots that may merge</td>
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<td>- rash lasts a few days</td>
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<tr>
<td>Rubella/German measles rash</td>
<td>Measles rash</td>
<td>Roseola rash</td>
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<td>(There is no typical rash)</td>
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</table>
Rubeola (measles)

- Fever (40°) first, cough, coryza, conjunctivitis
- Koplik spots
- Lastly, maculopapular, blanching rash beginning on the face
- Rash darkens after 3-4 days and then begins to fade and desquamate
- Clinical improvement within 48 hrs of rash
- Peaks Spring/Summer (March)

2014: 667 cases in US
2015: 189
2016: 86
2017: 120
2018: 372
Jan 1-May 10, 2019: 839

Rubeola (Measles)
**Rubeola (measles)**

- **Dx**
  - Anti-measles IgM and IgG titers
  - If confirmed or suspected case in US → report to health department

- **Tx**
  - Supportive care

- **Complications**
  - Fatal in 4-10% of cases in developing countries; 1-2% in US
  - Respiratory tract infections
  - Encephalitis (1/1000)
  - Acute disseminated encephalomyelitis (ADEM) (1/1000)
  - Subacute sclerosing panencephalitis (SSPE)

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**Open letter from Roald Dahl regarding the death of his daughter from measles**

*Measles A Dangerous illness*

Diva, my eldest daughter, caught measles when she was seven years old. As the illness took its usual course I can remember noting in her office the bed and not feeling particularly alarmed about it. The next morning, when she was well on the road to recovery, I was sitting on her bed, looking at her face. I noticed the expression of a child who is tired and not feeling well. She asked me if she was well enough to go to school.

"Are you feeling all right?" I asked her.

"I feel all right," she said.

In five hours, she was unconscious. In twelve hours she was dead.

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**Measles Can Be Serious**

- Get vaccinated: bring booster for immunization, photos, and fantastic memories — NOT measles!

**Get your measles vaccination.**

- Measles is a plane ride away: Next measles vaccination needed in high-risk countries and bring it into the U.S.
- Measles in 70 countries and 14 countries and bring it into the U.S.

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**Measles in a plane ride away:**

- Next measles vaccination needed in high-risk countries and bring it into the U.S.
The Golden “crusty” child

Hint – Two Types
- More common in children, higher incidence in Summer
- Staph, strep, or combined infection w/ discrete thin walled vesicles
- Stratified golden crusts when dry
- Mostly on exposed parts of the body, face and neck; spreads peripherally and clears centrally
- Methicillin-resistant S aureus (MRSA is an increasingly common cause of impetigo)
- Post-streptococcal glomerulonephritis is a rare complication – pedal edema and hypertension may be noted in a patient with non-bullous impetigo. If occurs, usually 10 days (1-5 week range) after lesions first appear

Impetigo
## Non-Bullous Impetigo
- Begins with a single asymptomatic erythematous macule
- Rapidly evolves into a vesicle or pustule, ruptures, released serous contents dry, leave a crusted, honey-colored exudate over the erosion
- Skin on any part of the body can be involved - face and extremities most common
- Occasional pruritus
- Regional adenopathy is common

## Bullous Impetigo
- Consists of small or large, superficial, fragile bullae
- Quickly appear, spontaneously rupture, and drain so that only the remnants, or collarettes, are seen at the time of presentation
- Minimal or no surrounding erythema and no regional lymphadenopathy

## Impetigo Treatment
- Topical mupirocin or retapamulin for single lesions of non-bullous impetigo or small areas of involvement
- Systemic antibiotics are indicated for:
  - Non-bullous impetigo with extensive involvement, in athletic teams, childcare clusters, multiple family members, or for bullous impetigo
  - Semi-synthetic penicillin or first generation cephalosporin (unless MRSA is suspected)
- Soak crusts often
Time for the “P” Presentations

What’s the Diagnosis?

Pityriasis Alba

- Mainly affects children and adolescents – prevalence about 5%
- A type of eczema – unknown cause - often seen in those with dry skin and atopic dermatitis – sun exposure may trigger
- Most common locations are face: cheeks and chin
- May also be seen on neck, shoulders and upper arm
- Hypopigmentation more noticeable in summer, especially on darker skin tones
- Dry skin and scale more noticeable in dry winter weather
- Lesions go through stages – scaly pink plaque to hypopigmented plaque with fine scale to post-inflammatory macule with no scale and then eventual resolution in a few months or a few years
Key Points – Pityriasis Alba

- Does NOT enhance with a Woods lamp – no fluorescence
- Fungal cultures are negative
- No treatment needed but if do for symptoms:
  - Moisturizer may help dry skin
  - Mild steroid cream may decrease erythematous areas
- Calcineurin inhibitor cream (pimecrolimus) or ointment (tacrolimus) may speed recovery of skin color

What's the Diagnosis?

Tinea Versicolor – Pityriasis Versicolor

- Caused by growth of fungi Malassezia
- Normal flora – not contagious
- Different colors – white (hypopigmented), brown, pink – sometimes scaly
- More commonly noted trunk, neck and/or arms
- Hypopigmented or hyperpigmented coalescing macules
- More prevalent in hot humid climates, and in those with excess perspiration
- May fluoresce with wood lamp (black light) examination – yellow-green fluorescence may be observed
Treatment of Pityriasis Versicolor

- Topical agents for local occurrence:
  - Topical azole cream/shampoo (econazole, ketoconazole)
  - Selenium sulfide or zinc-pyrithione types of shampoo
  - Terbinafine gel, Ciclopirox cream/solution
- Oral agents itraconazole and fluconazole for widespread area: But benign condition so risks of oral treatment may outweigh benefits
- Quick Points – can recur after treatment
- Exposure to the sun may trigger or worsen the exanthem - a tan makes it more visible – use sunscreen
- Warm and moist weather may precipitate an occurrence

What’s the diagnosis?

Pityriasis Rosea

- Benign, self-limited eruption
- Generally affects adolescents and young adults as a response to a viral infection
- Most commonly seen between ages 10 – 35 and during pregnancy

Treatment

- Directed to symptom relief with antihistamines for itching
- Moderate-potency steroids may be used for itching if necessary
- Spontaneous resolution usually occurs within 1-2 months.
In the Beginning
Proof that babies are delivered by storks

What’s the Diagnosis?

Stork bite = Nevus simplex = Salmon patch
- Red dilitation of blood vessels often on eyelid, face, or nape of neck (stork bite)
- They are usually small flat patches of pink or red skin with poorly defined borders
- Very common and occur in over 40% of all newborns
- The facial patches are sometimes referred to as an “angel's kiss” and tend to fade over the first year of life
Nevus simplex = Stork bite = Salmon patch

- Often deepen in color with crying, straining with defecation, breath holding or with changes in ambient temperature
- Not painful or itchy
- Benign course, reassurance, lighten with age
- Those on the eyelids and below towards the nose usually disappear by 2 to 3 years of age
- Rarely detected after age 6 years – those on neck (stork bite) often fade and/or are covered up by hair through adult life

What is this?

Cutis Marmorata

- Mottling of skin
- Transient phenomena
- Vascular response to cold with immature nervous system
- Superficial small blood vessels in the skin dilating (red color) and contracting (pale color) at the same time
- May persist for months
- Re-warming usually restores the skin to its normal appearance
- Occurs in about 50% of infants
- Generally resolves with increasing age and of no significance for most infants
What is the diagnosis?

Atopic Dermatitis - Eczema

- Most common form of eczema
- Often affects those who have:
  - Asthma or seasonal allergies
  - Family history of eczema, asthma or seasonal allergies
  - Usually begins during infancy or childhood, but may occur anytime
  - Defects in the skin barrier

A Moisture Barrier Problem
Atopic Dermatitis / Eczema

- Treatment:
  - Avoid triggers—cold, wet, irritants, emotional stress
  - Aggressive hydration with cream based or petrolatum based moisturizer to restore skin barrier
  - Less irritating soap
  - Infants—Low potency corticosteroid ointments for maintenance
  - Older children and adults—medium potency corticosteroid ointments, sparing the face
  - Stronger corticosteroids ointments should be used for flares or refractory plaques short term only to avoid thinning of skin
  - Calcineurin inhibitors (tacrolimus or pimecrolimus) — useful on face or eyelids
  - Short course oral Prednisone only for severe flares
  - Antihistamine therapy
  - New treatment option – crisaborole (Eucrisa) – a topical (PDE-4) phosphodiesterase 4 inhibitor for those age two and older

The Name Game
What is a Pompholyx?

- A. Specific type of lox in a bagel sandwich
- B. Figuring out ICD-10
- C. The newer term for hand/foot eczema, formerly known as dyshidrotic eczema and still referred to as vesicular endogenous eczema

The answer is C - more specifically, cheiropompholyx (hands) and pedopompholyx (feet)

Pompholyx = Dyshidrotic Eczema
Pompholyx - Dyshydrotic Eczema

- Pruritic areas of the fingers, palms of hands, sides of toes, soles and sides of feet. This condition can occur at any age but is most common before the age of 40 years.
- Sudden onset of vesicles — can occur at any age, most common before age 40.
- Burning pain or pruritus occasionally may be experienced before vesicles appear.
- Tiny vesicles erupt first along lateral aspects of the fingers and then on the palms or soles.
- Palms and soles may be red and wet with perspiration.
- Vesicles usually persist for 3-4 weeks.
- Vesicle outbreaks may occur in waves.

General Approach to Treatment

- Moisturize.
- Topical steroids (usually moderate to high potency).
- Oral steroids if needed for acute flares.
- Topical immune modulators.
- Watch for super-infection.

What’s the Diagnosis?

- A form of eczema, often arises in dry skin.
- More common in men over the age of 50, but can affect any age.
- Round, itchy, coin-shaped patches.
- Legs and arms most commonly affected.
- Initial light red, may ooze and crust, then later dry and scaly.
What’s the Diagnosis?

**Nummular Eczema**
(Discoid Eczema)
(Nummular Dermatitis)

- Pruritic, round, coin-shaped patches ranging in diameter from 1 to 10 cm
- If present, patients often have dry skin
- Legs and arms most common, but can appear on trunk, lower more often than upper
- Pathologic features similar to other forms of eczema
- May initially look like tinea corporis (potassium hydroxide - KOH) preparation will show segmented hyphae and arthrospores characteristic of all dermatophyte infections like tinea

Treatment

- Reduce skin dryness – moisturize two times per day – use cream or ointment
- Cool mist humidifier in bedroom or house if dry heat
- High or ultra high potency topical steroids once or twice daily for up to four weeks
- If treatment with topical not helping, patients may be treated with narrowband ultraviolet B (NBUVB) therapy
- Usually good long term results with skin hydration and short course of topical therapy
**What’s the diagnosis?**

- **Contact Dermatitis**
  - Allergic Contact Dermatitis – poison ivy, poison oak, poison sumac, even the skin of mangos (the sap of the tree and rind of the mango contains the oil, urushiol)
  - Irritant Dermatitis – touching or persistent contact with an irritant

  Examples – nickel found in jewelry, belt buckles, buttons, chemicals in nail products, dyes in clothes, scented soaps, etc.

**Treatment**

- Identify the cause and avoid, if possible
- Cool compresses
- Antihistamines
- Topical anti-pruritic agents
- Steroid Cream
- If secondary infection, antibiotic treatment
What's the Diagnosis?

A 3-month-old infant developed an asymptomatic scaly red eruption on the face and scalp. The lesions were well circumscribed and red-orange in color.

Clues:
- Most often seen in newborns and infants. Typically resolves by 12 months of age.

Infantile Seborrheic Dermatitis

- Occurs in about 10% of infants between 3 weeks to 12 months – peaks at three months (may last up to age two).
- Can appear on face (especially eye brows), scalp and skin folds.
- Sebaceous glands very active at birth due to the maternal androgens.
- Sometimes thick tenacious scale with crust and underlying erythema, scale often yellowish, white and greasy.
- Often with red papules extending in the skin folds or creases.
- May be an inflammatory response to Malassezia yeasts, which proliferate in oily skin.
- Increased risk for candida and Staph Aureus secondary infection, especially in diaper region.

Cradle Cap Treatment

- Initial treatment includes emollients (white petrolatum, mineral oil, vegetable oil) to loosen the scales, then removal of scales using a soft brush such as a toothbrush.
- Frequent shampooing with a non-medicated baby shampoo to soften and remove the scales using a soft toothbrush.
- If conservative measures fail, topical low potency corticosteroids (group 7 – hydrocortisone) once per day for one week. Ketoconazole 2% shampoo or cream is used twice per week for two to four weeks.
- For areas other than the scalp, ketoconazole 2% cream once a day for one to two weeks. Topical corticosteroid is applied once a day for up to one week.
Neck Folds and Intertriginous Region Treatment

- Ketoconazole 2% or other azole cream once a day for one to two weeks
- Topical creams or ointments containing zinc oxide and/or petrolatum
- If the rash does not resolve after one week of corticosteroid therapy or two weeks of antifungal therapy the diagnosis should be reconsidered
- Intermittent courses of treatment may be needed as this is often a reoccurring concern and may be a problem on and off for weeks to months before resolving

What is the diagnosis?

Key Clues

- Dandruff is often present
- Typical symmetrical distribution on the head and on the body
- More severe presentations - erythematous plaques, often with powdery/greasy scale in the scalp
- Besides itchy scalp, a burning sensation may occur in affected facial regions
- A chronic, relapsing condition
- Tends to worsen during cold and dry winter and improve during the summer
Seborrheic Dermatitis

- Chronic, superficial, inflammatory disease predilection for the scalp, eyebrows, eyelids, nasolabial creases, lips, ears, sternum, axillae, submammary folds, umbilicus, groin, and gluteal crease
- Indirect evidence for a role of lipid dependent fungi of the genus Malassezia
- Presentation: yellow, greasy, scaling on an erythematous base Dandruff is a mild form / Cradle cap is an infant form
- Parkinson’s disease can often have severe refractory seborrheic derm

Treatment

- Face – topical antifungal agents ketoconazole 2%, other azoles, ciclopirox olamine
- Scalp – Selenium sulfide 2.5% or ketoconazole 2% or ciclopirox 1% or zinc pyrithione 1% shampoos
- Other options: topical steroids (lower potency for face and inguinal regions), topical calcineurin inhibitors (tacrolimus and pimecrolimus)
- Zinc pyrithione 1% shampoo (antibacterial and antifungal properties) for scalp
- Shampoos with salicyclic acid and coal tar (may be a bit smelly) – keratolytic effects can loosen scales

What’s the Diagnosis?
Seborrheic Blepharitis

Primary Symptoms of Seborrheic Blepharitis

- Red and swollen eyelids
- Crusting and raw scales

Types of Seborrheic Blepharitis

- Anterior blepharitis - affects the outside front of the eyelid
- Posterior blepharitis - affects the inner eyelid

The two most common causes of anterior blepharitis are bacteria (Staphylococcus) and seborrheic dermatitis

Two skin disorders can cause this form of blepharitis: acne rosacea (red and inflamed skin) and seborrheic dermatitis

Erythematous, itchy and sometimes, a little edema of the eyelids
Eyelashes may have scales or crusts on or between them
Foreign body feeling in eye
Burning type feeling
Light sensitivity
Blurry vision
Dry eyes
Treatment

- Warm compresses
- Eyelid scrubs – keep eyelids clean and free the crust
- Antibiotics- if secondary infection
- Lubricating eye drops
- Skin and eyelid hygiene

What’s the Diagnosis?
THE RASH OF ZIKA

ZIKA TRANSMISSION RISK IN THE UNITED STATES

Risk of local Zika transmission
- None
- Seasonal
- Year round

Aedes aegypti
Aedes albopictus
Reported Clinical Symptoms Among Confirmed Zika Virus Cases

Macular or papular rash 90% - often pruritic
- Subjective fever
- Arthralgia
- Conjunctivitis
- Myalgia
- Headache
- Retro-orbital pain
- Edema
- Vomiting

<table>
<thead>
<tr>
<th>ZikavirusNET.com</th>
<th>Dengue</th>
<th>Zika</th>
<th>Chikungunya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset post infection</td>
<td>usually 4 to 7 days</td>
<td>1 in 5 become ill</td>
<td>3 to 7 days</td>
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<tr>
<td>Fever</td>
<td>above 38°C</td>
<td>No or mild fever</td>
<td>high fever &gt;38°C</td>
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<td>4-7 days</td>
<td>1-2 days</td>
<td>2-3 days</td>
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<tr>
<td>Headache</td>
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<tr>
<td>Rash</td>
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<td>+++</td>
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<td>Itch</td>
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<td>Joint pain (arthralgia)</td>
<td>+/-</td>
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<td>+++</td>
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<tr>
<td>Muscle pain (myalgia)</td>
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<td>+</td>
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<tr>
<td>Red eyes (conjunctivitis)</td>
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<td>+/-</td>
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<td>Low level of white blood cells and platelets</td>
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<td>+</td>
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<td>+/-</td>
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<tr>
<td>Shock</td>
<td>+/-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Recovery</td>
<td>6-7 days (only of)</td>
<td>4-7 days</td>
<td>&lt; 1 week</td>
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### WHAT'S THE DIAGNOSIS?

- Sometimes itchy
- Sometimes burning type sensation
- Pressure on the skin can cause it
- Can be distressing but is not life threatening
- Can last minutes or hours
**TYPES**

- **Red dermatographism**: most common type - develops as small raised scratches on the skin which occurs on trunk.
- **Follicular dermatographism**: prominent follicular papules on the skin with a well defined background.
- **Cholinergic dermatographism**: somewhat large embedded with punctuate wheals resembling urtica. Brought on by a physical stimulus. Although this stimulus might be considered to be heat, the actual precipitating cause is sweating.
- **Delayed dermatographism**: papules develop after several hours of initial response forming deep wheal like structure.

**Dermatographism**
(also called Dermographism)

- Most common type of inducible urticaria
- Estimated to affect 2 – 5% of population
- Rapid wheal and flare reaction
- Elicited by physical or environmental stimuli
- Wheal may appear within 6-7 minutes, often gone in 30 minutes
- Patients often unaware when symptoms appear from emotions, cold or hot water, exercise, etc.
- Simple non-pruritic dermatographism without itching – no treatment required
- If skin is dry – hydrating creams or ointments

**Symptoms and Causes**

- Generalized itchiness or the sensation of burning
- Irritation at one site of the body can result in mast cells in other parts of the body releasing histamine although they have not been directly stimulated
- Can be induced by tight or abrasive clothing, watches, glasses, heat, cold, or anything that causes stress to the skin or the patient
- In many cases it is merely a minor annoyance, but in some rare cases symptoms are severe enough to impact a patient's life.
Treatment Approaches

- Antihistamines – start with non-sedating second generation
- A combination of two or more antihistamines may be required – may consider adding an H2 blocker (ranitidine, etc)
- Moisturize to reduce scratching in case of dry skin
- Xolair (Omalizumab) – 150 mg SC – may relieve persistent symptoms of persistent urticaria within days – approved by FDA for patients with chronic idiopathic urticaria refractory to antihistamines
- Decrease and/or avoid symptom triggers

Is it Time To Re-Think the Ink?

Re-Think the Ink
What’s the Diagnosis?

Localized Lichenoid Reaction

- Red tattoo pigments cause the most reactions, particularly those made from mercury sulfide (cinnabar)
- Thought to cause cell-mediated delayed hypersensitivity reaction (can occur from weeks to years later)
- Usually confined to the red parts of the tattoo
- Small, flat-topped polygonal plaques
- Grow together into rough, scaly plaques

Treatment

- Topical and intralesional corticosteroids
- Sun protection
- Laser treatment has been helpful with both Q-switched Nd:YAG and erbium
Patterns of Red Tattoo Reactions

- Allergic contact dermatitis
- Lichenoid dermatoses - thickening of the stratum corneum
- Granulomatous
- Pseudolymphoma
- Pseudoepitheliomatous hyperplasia - similar to squamous cell carcinoma and keratoacanthoma

Hidden Concern?

Harder to detect skin cancer
Key Points

- Tattoos do not protect the skin from sun damage and may be more vulnerable to sun damage.
- Tattoo ink changes skin color - can cover up/or change appearance of moles.
- After skin lesions injected with ink, it can be difficult to detect mole changes.
- Laser removal of tattoo removes the pigment that the melanoma cells make ... melanoma will not be detected as easily. Some subtypes of melanoma such as amelanotic melanomas, are more dangerous and aggressive.
- Screen those with ink regularly for potential skin cancer.

What is the diagnosis?

Seborrheic Keratosis

- Facts: Oval, raised, brown to black sharply demarcated papules or plaques; they appear "stuck on" or "warty"
- Involving mostly chest or back but can be anywhere.
- Pathogenesis: Unknown.
- Treatment: Removed by liquid nitrogen, curetage, light fulguration, shave removal, and CO2 laser vaporization.
ICD10
W220.2XD: Walked into lamppost, subsequent encounter

What is the diagnosis?

Acne Rosacea

Subtype 1: Facial flushing and persistent redness
Subtype 2: Bumps and pimpls, reddened patches
Subtype 3: Engorgement of the nose
Subtype 4: Eye irritation
+ Acne Rosacea

- Facts: Persistent erythema of the convex surfaces of the face
  - Commonly assoc. with telangiectasia, flushing, erythematous papules and pustules
  - Cheeks and nose of light skinned women age 30-50 most commonly affected
  - Severe phymatous changes in men
  - Exacerbated by stressful stimuli, spicy food, exercise, cold or hot, and alcohol
  - Pathophysiology: Abnormal vasomotor response to stimuli
  - Treatment: Sunscreen, avoidance of triggers, laser, metronidazole cream, sodium sulfacetamide, sulfa cleansers and creams, azaleic acid, Low dose Tetracycline or Minocycline po daily

+ What's the Diagnosis?

+ Hints

- Can develop when hair follicles become blocked and inflamed
- More likely in areas where skin tends to rub together
- Not caused by an infection and can't be transmitted sexually. Not contagious and not due to poor hygiene
- Commonly occurs between the ages of 20 and 29 – but general age range between puberty and age 40
- More common in women, often a family history
- Can be associated with: arthritis, severe acne, obesity, inflammatory bowel disease, Crohn's disease, metabolic syndrome and diabetes
- Link to tobacco smoking
Hidradenitis Suppurativa (HS)

Diagnostic Criteria

<table>
<thead>
<tr>
<th>Diagnostic Criteria</th>
<th>Hurley’s Staging</th>
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<tbody>
<tr>
<td>Typical lesions: deep seated painful nodules, sinus tract, early lesions, abscesses, draining sinuses, bridging scars, and open ‘pseudolocum’ comedones/e secondary lesions</td>
<td>Stage 1 – solitary or multiple, isolated abscess/formation without scarring or sinus tracts</td>
</tr>
<tr>
<td>Typical topography: axillae, groin, perineal and perianal regions, buttocks, infra- and intermammary folds, and</td>
<td>Stage 2 – recurrent abscesses, single or multiple widely separated lesions, with sinus tract formation</td>
</tr>
<tr>
<td>Chronicity and recurrences.</td>
<td>Stage 3 – diffuse or broad involvement, with multiple interconnected sinus tracts and abscesses</td>
</tr>
</tbody>
</table>

Hurley Stage Examples

![Hurley stage 1](image1)
![Hurley stage 2](image2)
![Hurley stage 3](image3)
**What’s the Diagnosis?**

**Key Clues**

- Benign – often a family history
- Condition of childhood and adolescence
- May be more noticeable during puberty
- Can extend into adult years – usually improves with age
- More common in women
- Keratin builds up in hair follicles – forms hard bumps = rough skin surface
- Appears in different colors - the same color as the skin - white, red, pinkish purple and brownish black (on dark skin)
- Most commonly found on upper arms and thighs, less common buttocks and cheeks
- Often worse during winter and when skin is dry
Keratosis Pilaris - KP

What Does Keratosis Pilaris Look Like?

Treatment of Keratosis Pilaris

- Gently exfoliate
- Diminish the bumpy appearance – remove dead skin cells with a keratolytic with one or more of the following ingredients: Alpha hydroxyl acid, glycolic acid, lactic acid, salicylic acid, urea and/or a retinoid (adapalene, tretinoin, etc.)
- Relieve the itch and dryness – cream or ointment with either urea or lactic acid right after using a keratolytic
- Integrative therapy – omega 3 fatty acids, topical coconut oil after a warm (not hot) bath or shower
What's the Diagnosis?

A 12-year-old male was seen two weeks ago with a sore throat. The rapid strep test was positive and treatment was started with amoxicillin. His parents call regarding a new rash that has erupted all over his body. The palms and soles remain uninvolved. What is this???

Possible link to streptococcal infection?
Appear as drop-like papules

Which one of the following is the most likely diagnosis of this patient’s exanthem?

- a. Chicken pox
- b. Pityriasis rosea
- c. Streptococcal scalded skin syndrome
- d. Cutaneous papillitis rosetta
- e. Guttate Psoriasis
Guttate Psoriasis

- Small, salmon-pink (or red) papules
- The drop-like lesions may itch
- The outbreak usually starts on the trunk, arms, or legs and sometimes spreads to the face, ears, or scalp
- The palms and the bottoms of the feet are usually not affected.

- Trigger is usually a streptococcal infection
- More common in children and young adults
- The eruption of the scaly, “drop-like” papules on the trunk and extremities usually appears two to three weeks after a streptococcal throat infection
- Streptococcal superficial perianal dermatitis in children has also been linked with guttate psoriasis
- Often mistaken for a drug rash because antibiotics may have been initiated for the streptococcal infection
- Throat cultures for streptococcal pharyngitis should be obtained
- Has a good prognosis and may disappear spontaneously or may benefit from phototherapy

Treatment

- Usually goes away in a few weeks without treatment
- Simple reassurance and moisturizers to soften the skin may be sufficient care
- Treatment depends on the severity of the outbreak. Topical steroids, although effective, could be bothersome because the outbreak occurs over a large portion of the body in most cases of guttate psoriasis
- Antibiotics: If someone has a history of psoriasis, the doctor will most likely take a throat culture when that individual has a sore throat. If the culture results are positive, start antibiotics if not already begun
- Phototherapy: Sunlight can help clear up this type of psoriasis
- Phototherapy with ultraviolet light B (UVB) or PUVA (light-sensitizing psoralen plus ultraviolet A)
What’s the Diagnosis?

- Skin cells that multiply up to 10 times faster than normal
- As new cells reach skin’s surface and die, huge volume of cell causes raised and reddish plaques, often with white scales
- Pruritus very common
- Most likely to affect elbows, knees, and lower back, but can affect other areas

Key Clue
Can also affect the nails

- Pitting
- Oil spot sign
- Onycholysis
- Subungual hyperkeratosis
- Plate abnormalities
- Splinter hemorrhage
Plaque Psoriasis

- Most common type of psoriasis
- Chronic and relapsing in nature
- Symmetrically distributed over the body
- Small to large, well demarcated, red, scaly and thickened areas, lesions on the legs sometimes carry a blue tint
- Large plaques with silvery scale may join to involve large areas of skin, especially trunk and limbs
- Large plaque form usually begins before age 40, difficult to treat. Often family history.
- Small plaque form often begins after age 40

Treatment of Plaque Psoriasis

- Sunshine (heliotherapy), warm water baths (soften plaques), moisturizers, keratolytics (urea, salicylic acid)
- Topical agents include: Corticosteroids, coal tar, anthralin, Calcipotriene, Tazarotene
- Phototherapy:
  - Ultraviolet B (UVB) irradiation - usually combined with one or more topical treatments
  - Psoralen plus ultraviolet A irradiation (PUVA) - This treatment uses the photosensitizing drug 8-methoxypsoralen in combination with UVA irradiation to treat patients with more extensive disease

Systemic Treatment

- Often utilized if other treatment options and phototherapy have proved unsuccessful
- Considered for patients with very active psoriatic arthritis, as well as for patients whose disease is physically, psychologically, socially, or economically disabling
- Psoriatic arthritis - Occurs in approximately 10-20% of all cases of plaque psoriasis, symptoms may include:
  - Red, warm, tender, and inflamed joints, joint deformity
  - Options include: methotrexate, cyclosporin, others
  - Biologics response modifiers such as infliximab, etanercept, others
What's the Diagnosis?

- A UV light induced lesion
- Malignant potential
- Begin as small “rough spots”
- Over time the lesions enlarge, usually becoming red and scaly
What's The Diagnosis?

Actinic Keratosis (AK)

Risk Factors
- Hair color is naturally blond or red
- Fair skin
- Eyes are naturally blue, green, or hazel
- Skin freckles or burns when in the sun
- 40 years of age or older*
- Weakened immune system
- Roofers (have a higher risk because they work with tar and spend their days outdoors)
- AK's appear earlier in people who use tanning beds and sun lamps*

Actinic Keratosis – AK

Treatment Options

PROCEDURES
- Cryotherapy
- Chemical peel
- Curettage – possibly followed by Electrosurgery
- Photodynamic therapy (PDT)
- Laser resurfacing

MEDICATIONS
- 5-fluorouracil (5-FU) cream
- Diclofenac sodium gel
- Imiquimod cream
- Ingenol mebutate gel
**AK on bottom lip = Actinic Cheilitis**

**Potential Signs**
- Whitish scale on bottom lip
- Rough scaly lip
- Splitting lips or your
- Lips always feel dry

**Actinic Cheilitis**

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**What is the Diagnosis?**

**Basal Cell Carcinoma**

- Facts: Common in fair-skinned people with UVR (blistering sunburns as a child) and immunosuppression
- Usually appears as a small waxy, translucent, "pearly" or "rolled border" around a central depression that may be ulcerated, crusting or bleeding; telangiectasias course throughout
- Commonly on the head or neck (esp nose)
- These tumors grow slowly and more laterally; rarely metastatic
- Treatment: Biopsy suspected lesions
  - Imiquimod if superficial lesions, photodynamic therapy or excision with clean margin;
  - MOHS surgery if cosmetic area or extensive, invasive lesion

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What is the diagnosis?

Squamous Cell Carcinoma

Frequency of disease

<table>
<thead>
<tr>
<th>Caucasians</th>
<th>Other races</th>
<th>People of color</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th most common skin cancer</td>
<td>2nd most common skin cancer in Blacks; 2nd most common in Hispanics, Asians</td>
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</tbody>
</table>

Risk factors

- Sun exposure, fair skin, immunosuppression, human papillomavirus infections, scarring
- Chronic scarring/inflammation from burns, leg ulcers, radiation, lupus, immunosuppression, human papillomavirus

Typical clinical presentation

- Superficial lesion arising from indurated, rounded, elevated base
- Sore that will not heal (bleeding or developing a crust)

Anatomic distribution

- Sun-exposed areas (head and neck, hands)
- Skin infrequently exposed to the sun (legs, palms, test, etc.)

Key Points

- In those with brown or black skin – cancer of the skin is often diagnosed at a later stage
- Skin cancer frequently develops on parts of those with darker skin in areas that get little sun
- Common areas to check that may be overlooked include the palms, lower legs, bottom of foot, around anus, nails or around genitals
**Squamous Cell Carcinoma**

- Common in fair-skinned people from UVR.
- Usually at site of initial actinic keratosis; appears from an indurated base and becomes elevated with telangiectasias becoming progressively nodular and ulcerated—hidden by a thin crust.
- Usually on the face, ear, lips, mouth or dorsal hand and arms.
- Increased likelihood with immunosuppression.
- Can develop into large masses and spread deeper into the tissues and occasionally to other parts of the body.
- Treatment: Biopsy suspected lesion; Electrodessication and curettage x 3 and/or 5-FU, or imiquimod if small & superficial.

**What is the diagnosis?**

**Harder to detect skin cancer**
Melanoma

- Facts: Cancer of the pigment producing cells in the epidermis, or upper surface of the skin.
- Frequently metastatic if not found early
- Most common locations are the exposed parts of the skin, particularly the face and neck
- Hereditary forms have a predilection for areas of sun protection—palms, soles, fingernails and vaginal mucosa

Melanoma

Variants of melanoma

- Lentigo maligna - flat and thin variant, frequently presenting as a large freckle
- Superficial spreading - flat, or only slightly raised, and a bit more uniform in color
- Nodular melanoma - elevated and often rounded growth of the cancer
- Acral lentiginous - occurs on the palms and soles of the hands and feet, or in the cuticles or nail beds
- Desmoplastic - does not often produce pigment and is the most difficult to diagnose without a biopsy

ABCD’s

- Asymmetry - Melanoma lesions are typically irregular in shape. Benign moles are round.
- Border - Melanoma lesions typically have uneven borders, while benign moles have smooth, even borders.
- Color - Melanoma lesions often contain many shades of brown or black; benign moles are usually one shade.
- Diameter - Melanoma lesions are often more than 5 millimeters in diameter (the size of a pencil eraser); benign moles are smaller.
- Evolutionary Change - Documented change of appearance in the lesion over time.
Eighth Edition American Joint Committee on Cancer (AJCC)

- Melanoma staging system groups patients into four prognostic stage groups based upon:
  - The tumor (T)
  - Node (N)
  - Metastases (M)
  - Parameters (age, gender, location, others)
- The eighth edition AJCC staging system distinguishes between clinical and pathologic staging

The American Joint Committee on Cancer (AJCC) TNM System

- **Key Components**
  - **T** - tumor (how far it has grown within the skin - thickness and other factors - ulceration and mitotic rate)
  - **N** - spread to nearby lymph nodes
  - **M** - whether the melanoma has metastasized to distant organs, which organs it has reached, and on blood levels of LDH.
- Two types of staging for melanoma:
  - Clinical staging - what is found on physical exam, biopsy/removal of the main melanoma, and any imaging tests that are done.
  - Pathologic staging - determined after node biopsy results - may be higher than clinical stage

Melanoma

- MOHS may be an option for lentigo maligna which has frequent asymmetrical growth patterns
- Sentinel Node Biopsy in pt’s whose melanoma is thicker than 1 mm, or if ulceration present
- Adjuvant therapy if node positive or increased tumor thickness
- Treatment options are varied depending on results of AJCC TNM staging
Melanoma

Thank you