Adult Dermatology: Name That Rash and Lesion

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Objectives

Upon completion of this lecture, the participant will:
1. Identify various dermatology conditions found in adults
2. Discuss those dermatology conditions that require an immediate referral
3. Develop an appropriate plan for evaluation, treatment, and follow-up of the various lesions

Dermatofibroma

- Common, benign asymptomatic lesions
- May be slightly itchy; Retract beneath the skin when you try to elevate them
- 1-10 lesions occurring on the extremities; most common location is the anterior surface of the lower leg
- Etiology: fibrous reaction to trauma, virus or an insect bite
  - Multiple lesions: Systemic lupus

Wright, 2008
Dermatofibroma

- Size: 3 – 10 mm in size
- Color: pink - brown
- Appearance: may appear slightly scaly and feel hard
- Treatment:
  - Generally – nothing needs to be done about these lesions
  - Not worrisome
  - Biopsy occasionally warranted if unsure of lesion etiology
Dermatofibroma

- **Treatment**
  - Monitor
  - Elliptical excision
  - Shave excision
  - Cryosurgery

Contact Dermatitis:
Rhus Dermatitis

- **Rhus Dermatitis**
  - Poison ivy, poison oak and poison sumac produce more cases of contact dermatitis than all other contactants combined
  - Occurs when contact is made between the leaf or internal parts of the roots and stem and the individual
    - Can occur when individual touches plant or an animal does and then touches human
  - Eruption can occur within 8 hours of the contact but may take up to 1 week to occur

Clinical Pearls

- Poison ivy is not spread by scratching
- No oleoresin is found in the vesicles and therefore, can not be spread by scratching
- Lesions will appear where initial contact with plant occurred
- Resin needed to be washed from skin within 15 minutes of exposure to decrease risk of condition
Clinical Presentation

- Clinical presentation
  - Characteristic linear appearing vesicles are likely to appear first
  - Often surrounded by erythema
  - Intensely itchy
  - Lesions often erupt for a period of 1 week and will last for up to 2 weeks
  - More extensive and widespread presentation can occur with animal exposures or burning of the plants / smoke exposure

Contact Dermatitis

- Image of skin with contact dermatitis

Contact Dermatitis

- Image of skin with contact dermatitis

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Treatment

- Cool compresses 15 – 30 minutes three times daily
- Topical calamine or caladryl lotions
- Zanfel (OTC) wash – binds urushiol oil and removes from body/blisters
  - 75% decrease in itching and rash within 24 hours per package
- Colloidal oatmeal baths (AVEENO) once daily

Treatment

- Oral antihistamines
  - May wish to use sedating antihistamines at bedtime
- Topical corticosteroids
  - Avoid usage on the face
- Oral prednisone vs. injectable Kenalog or similar
  - 20 mg two times daily x 7 days
  - Kenalog 40 mg injection (IM)

Follow-up

- Monitor for secondary infections
- Impetigo
  - Staph vs. strep
  - MRSA
- Education:
  - Lesions will decrease over a 2 week period
  - May continue to erupt over 48 hours despite steroid administration
  - Not spreading lesions with rubbing or scratching
Hot Tub Folliculitis

- Inflammation of the hair follicle
- Caused by infection which occurs within 8 hours – 5 days of using contaminated hot tub or whirlpool
- Unfortunately, showering after exposure provides no protection
- Pseudomonas is the most common cause of hot tub folliculitis
- May also be caused by Staphylococcus, but unusual
- MSSA or MRSA

Clinical Presentation

- One or more pustules may first appear
- Fever may or may not be present; usually low grade if it does occur
- Malaise and fatigue may accompany the outbreak
- Pustules may have wide rims of erythema

Hot Tub Folliculitis

[Image of pustules and erythema]
Treatment

- Culture of lesions is likely warranted
- White vinegar wet compresses – 20 minutes on three x daily may provide significant benefit
- Oral Antibiotics
  - Ciprofloxacin is preferred agent if hot tub folliculitis is suspected due to pseudomonas coverage
- Discuss contagiousness
  - No evidence that it is spread person - person

Perioral Dermatitis

- Occurs in young women and closely resembles acne
- Papules and pustules are frequently present
- Lesions are confined to chin and nasolabial folds
- Can also occur in children
- Cause is unknown but is believed to be exacerbated by benzoyl peroxide, tretinoin, alcohol based products and frequent moisturizing
**Treatment**

- Tetracycline creams
  - Two times daily x 4 weeks
- Erythromycin creams
  - Two times daily x 4 weeks
- Metrogel
  - Two times daily x 4 weeks
  - May not be as effective as above agents
- Avoid topical steroids
- Stop moisturizing

**Seborrheic Keratoses**

- Most common benign skin lesion
- Unknown origin
- No potential for malignancy
- Usually asymptomatic
- Rarely familial
- Most individuals develop 1 or more of these lesions throughout lifetime

**Seborrheic Keratoses**

- Characteristics
  - Smooth surface with tiny round, embedded pearls
  - May be rough, dry and cracked
  - Sharply demarcated
  - Appear stuck on the surface
  - Vary in size from 2 mm to 3 cm
  - Lesions are completely epidermal with no deep tissue penetration
Seborrheic Keratoses

Seborrheic Keratosis

Can Mimic a Malignant Melanoma
Seborrheic Keratoses

- Treatment
  - Reassurance
  - Lesions are only removed for cosmetic purposes or for a biopsy if pathology is unknown
  - If removed, shave excision
  - Cryosurgery
  - Monitor for any increase in size, change in appearance

Acne Vulgaris

- Etiology
  - Disease involving the pilosebaceous unit
  - Most frequent and intense where sebaceous glands are the largest
  - Acne begins when sebum production increases
  - Propionibacterium acnes proliferates in the sebum
  - P. acnes is a normal skin resident but can cause significant inflammatory lesions when trapped in skin

Acne Vulgaris

- Noninflammatory lesions
  - Open and closed comedones
- Inflammatory lesions
  - Papules, pustules and nodules (cysts)
Acne Vulgaris

- Symptoms
  - Papular lesions on the face, chest and back
  - White heads
  - Black heads
- Signs
  - Papular lesions
  - Closed and open comedones

Closed Comedones

[Image of closed comedones on skin]

Closed Comedones

[Image of closed comedones on skin]
Open Comedones

Cystic Acne

Acne Vulgaris

- **Diagnosis**
  - History and physical examination
- **Plan**
  - Diagnostic: None
Acne Vulgaris

Therapeutic

- Benzoyl Peroxide (2.5%, 5% and 10%)
  - Effective as initial medication
  - Begin early on in the disease process
- Tretinoin
  - Very effective agent
  - Start with 0.05% - 0.1% cream
  - Reduces and minimizes scarring
- Topical Antibiotics
  - Initial medication or can be combined with benzoyl peroxide
  - Erygel, clindamycin are most commonly utilized

Oral Antibiotics

- Tetracycline
- Minocycline
- Erythromycin
- Cephalosporins
  - Should only be used when topicals are ineffective or when patient has moderate disease at presentation
- OCP's
  - Women desiring contraception who also have acne
- Accutane
  - Cystic acne or mod-severe disease

Plan

- Educational
  - 6 weeks for improvement to be seen
  - Avoid antibacterial soaps
  - Dove soap or similar is recommended
  - Avoid hats
  - Foods have not been implicated as a cause
  - Caramel products may worsen situation
  - Avoid picking at the lesions
  - Review side effects of the medications
Psoriasis

Etiology
- 1-3% of the population worldwide
- Transmitted genetically
- Disease is lifelong; often beginning in childhood
- Characterized by chronic, recurrent exacerbations and remissions
- Stress can precipitate an episode
- Strep pharyngitis has been known to precipitate the onset

Psoriasis

Etiology
- Physically and emotionally disabling
- Erodes self esteem and often forces the patient into a life of concealment
- Medications can precipitate (Beta blockers, lithium)

Psoriasis

Symptoms
- Red, scaling papules that coalesce to form round-oval plaques
- Scale is silvery white and is adherent
- When removed, bleeding occurs (Auspitz's sign)
- May begin at a site of a sunburn or surgery
  - This is called Koebner's phenomenon
- Elbows, knees, scalp, gluteal cleft, toenails, fingernails
  - Extensor surfaces
Psoriasis

- Signs
  - Erythematous papules
  - Plaques
  - Nail involvement
  - May be associated with arthritis

Psoriasis

Guttate Psoriasis
Psoriasis

Diagnosis
- History and physical examination
- Biopsy if uncertain

Plan
- Diagnostic: None

Therapeutic
- Topical corticosteroids
  - Pulse therapy
  - Two weeks on/ two weeks off
  - Caution: side effects
- Dovonex
  - Vitamin D3 analogue
  - Works by inhibiting epidermal cell proliferation
  - Can be used long-term and is very safe
  - Dovonex ointment two times daily x 8 weeks
  - May see about a 70% improvement
- Tar: newer preparations are more pleasant
- Intralesional steroids

Ultraviolet light B
- Retinoids
- Systemic Treatments
  - Methotrexate
  - Plaquenil
  - Enbrel
Psoriasis

- Plan
  - Educational
    - Moisturize
    - Consider psychological therapy
    - Review the nature of this chronic disease

Skin Tags (Achrochordons)

- Very commonly encountered benign lesions
- Seen in approximately 25% of men and women
- Most common locations: axilla, neck, inguinal region
- Usually begin in 2nd decade and peak by the 5th decade of life

Skin Tags (Achrochordons)

- Appearance
  - Begins as a tiny flesh-toned or brown lesion
  - May increase to 1 cm in size
  - Hallmark: polypoid mass on a long narrow stalk
  - Bleeds very easily; particularly because they often get caught on a necklace or clothing
Diagnosis?
Linked with_____________?

Skin Tags

Skin Tags (Achrochordons)

- Treatment
  - Shave excision
  - Cryosurgery
  - Electrocautery
Case Study

- S:TM is a 64-year-old Caucasian male who presents with a painful rash located on his right buttock.
  - Describes the rash as red and blistered
  - Has been present x 96 hours and is in for an evaluation because the pain is severe.
  - Pain is “9” on 0 – 10 scale. Has tried oral OTC medications without significant improvement. Pain is described as a burning sensation; deep in his buttock.
  - Denies precipitating factors. Pain began approx 2 days before the rash appeared. Denies fever, chills, new soaps, lotions, changes in medications.
- Medications: atorvastatin 40 mg 1 po qhs; amlodipine 5 mg 1 po qhs; loratidine 10mg 1 po qd; aspirin 81 mg 1 po qam; various vitamins

Case Study

- Allergies: NKDA
- PMH: dyslipidemia; hypertension; obesity, allergic rhinitis
- Social history: 30 pack year history of cigarette smoking; none x 10 years; Machinist; happily married x 40+ years

Case Study

- O: T:97.8; P: 94; R:18; BP: 148/90
  - Skin: p/w/d; approximately 15-20 vesicles located on right buttock overlying an erythematous base; vesicles are clustered but without obvious pattern; no streaking, petechiae. Few scattered vesicles on posterior aspect of right thigh; no lesions on left buttock or leg
  - Hips: FROM: no tenderness, erythema, masses
Case Study

- O: PE continued
  - Back: From: no tenderness, erythema, masses
  - Abdomen: Soft, large; + BS; no masses, tenderness, hsm
  - Neuro: intact including light touch, pain, vibratory to right lower extremity; heel, toe walking intact
    - + Allodynia
      - Clothing, light touch, cool object
    - + Hyperalgesia
      - Painful stimuli elicited significant pain

Examples of Herpes Zoster

Herpes Zoster
Acute Herpes Zoster

Herpes Zoster

- Highly contagious DNA virus which during the varicella infection (primary infection) gains access into the dorsal root ganglia
- Virus remains dormant for decades and is reactivated when an insult occurs to the individual’s immune system
  - Examples: HIV, chemotherapy, illness, stress, corticosteroid usage

Incidence and Prevalence

- 3 million cases of chickenpox yearly
  - Disease of childhood
- 600,000 - 1 million cases of herpes zoster each year in the United States
  - Tends to be more of a disease of aging
  - By age 80, 20% of us will have zoster at some point in our lifetime
  - Men = Women

www.niaid.nih.gov/shingles/cq.htm
Risk Factors

- Increasing age (50-60 years and beyond)
- Varicella infection when < 2 years of age
- Immunosuppression
- Stress (controversial)
- Trauma
- Malignancies
  - 25% of patients with Hodgkin’s will develop zoster\(^1\)


Goals of Treatment

- Treat acute viral infection
  - Shorten course
  - Reduce lesions
- Treat acute pain
- Prevent complications
  - Postherpetic neuralgia

Acute Treatment Options

- Antiviral
  - Goal: Reduce viral reproduction
- Corticosteroids
  - Initially postulated that these reduce viral replication; recent studies have not found this to be true
  - However, they do decrease pain
- Pain Management
  - Topical agents
  - Anti-inflammatory agents
  - Narcotics
- Postherpetic neuralgia prevention

www.aad.org/pamphlets/herpesZoster.html
Antiviral Treatment Options

- Ideally, want to begin within the first 72 hours of the eruption as benefits may be reduced if started after that
- These medications decrease duration of the rash and severity of the pain
  - Studies vary as to how much these products actually reduce the incidence of post-herpetic neuralgia

Controlled Trials of Antiviral Agents in Herpes Zoster

<table>
<thead>
<tr>
<th>% of patients with PHN at:</th>
<th>3 months</th>
<th>6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acyclovir vs. Placebo</td>
<td>25% vs. 54%</td>
<td>15% vs. 35%</td>
</tr>
<tr>
<td>Valacyclovir vs. Acyclovir</td>
<td>31% vs. 38%</td>
<td>19.9% vs. 25.7%</td>
</tr>
<tr>
<td>Famciclovir vs. Placebo</td>
<td>34.9% vs. 49.2%</td>
<td>19.5% vs. 40.3%</td>
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Corticosteroids

- Often utilized despite mixed results in clinical trials
- Prednisone, when used with acyclovir, in one study reduced pain associated with herpes zoster
- Corticosteroids are currently recommended for individuals over 50 years of age with HZ
- Dosage:
  - 30 mg bid x 7 days; 15 mg bid x 7 days; 7.5 mg bid x 7 days

Pain

- Pain associated with herpes zoster can range from mild – severe
- Clinician must tailor pain medication options based upon individual presentation

Pain Management

- Topical Agents
  - Calamine lotion to lesions 2 – 3x/day
  - Betadine to lesions qd
  - Capsaicin cream once lesions crusted 3 – 5x/day
  - Topical lidocaine 5% patch for 12 hours at a time once lesions are crusted

Acute Pain Management

- Oral Agents
  - Acetaminophen
    - Has not been shown to be effective in trials
  - Ibuprofen or similar
    - Not likely to be effective with neuropathic pain
- Nerve Blocks
  - Have been shown to be effective for many individuals with severe pain in some trials; other trials - ineffective

And…the use of medications such as TCA’s, gabapentin, pregabalin, oxycodone and tramadol during the acute phase of HZ decrease pain but also may also reduce the risk of PHN.

Follow-up

- Monitor for secondary infections
- Monitor for evidence of postherpetic neuralgia
- Monitor for adverse impact on quality of life

Bullous Pemphigoid

- Bullous pemphigoid is a rare, benign subepidermal rash characterized by bullae formation
- Origin is unknown
- Disease of the elderly
- Most cases occur after 60 years of age
- No evidence to support any association with other conditions or diseases
- May be an association with concomitant medication usage
Bullous Pemphigoid

Clinical Manifestations
- Begins with a localized area of erythema which looks similar to hives/urticaria
- Itching is moderate – severe
- Over the course of 1 – 3 weeks – area becomes darker red or cyanotic in appearance
- Resembles – erythema multiforme
- Vesicles and bullae rapidly appear

Most common locations are:
- Abdomen
- Groin
- Flexor surfaces of the arms and legs
- Palms and soles are also affected
- Nikolsky’s sign is negative

May last 9 weeks – 17 years
- Average – 2 years
- Periods of remission will follow exacerbations
- Afebrile
- No systemic illness
Bullous Pemphigoid

Diagnosis

- History and physical examination
- CBC with differential
  - Eosinophilia will be present in 70% or greater of individuals
- Biopsy of lesions/skin

Treatment

- Atarax or similar for itching
- Topical steroids
  - May be helpful in some
- Oral antibiotics
  - Successful resolution in some with the following agents:
    - TCN or Minocycline
    - Erythromycin
- Systemic steroids
- Immunosuppressive agents
  - MTX
  - Azathioprine
Actinic Keratoses

- Common, sun-induced, premalignant lesions
- Incidence: Increases with age, light complexion
- Caused by years of sun exposure
- Lesions frequently appear after the summer suggesting that sun exposure may cause lesions to become more active

Actinic Keratoses

- Clinical presentation:
  - Slightly roughened area that often bleeds when excoriated
  - Best recognized by palpation than observation when first begins
  - Progresses to an adherent yellow crust
  - Size: 3-6 mm
  - Common location: scalp, temples, forehead, hands
  - Lesion with drainage suggests degeneration into a malignancy

Actinic Keratosis
Actinic Keratosis

- Keratin may accumulate and transform lesion into a cutaneous horn
- Frequently seen on the pinna of the ear

Actinic Keratoses

- Prognosis
  - Can spontaneously regress if sun exposure is eliminated
  - Good prognosis if treated adequately
  - Small percentage transform into a squamous cell carcinoma which can metastasize
  - 60% of all squamous cell carcinomas began as an actinic keratosis

Actinic Keratoses

- Treatment
  - Cryosurgery
    - Preferred method
  - Surgical Removal
  - Tretinoin
    - 0.05% - 0.1% cream applied once daily at bedtime
    - If no improvement in 3 – 4 months, treat with cryosurgery
Actinic Keratoses

- **Treatment**
  - 5-fluorouracil
  - Topical chemotherapeutic agents
    - Example – Actinex
  - Imiquimod (Aldara)
    - 2x weekly x 16 weeks
  - Acid peels
    - Glycolic acid chemical peels
  - Sunscreen

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Follow-up

- Continuous monitoring of skin for changes in lesions
- Monitor for new lesions
- Sunscreen is essential
- Minimize sun exposure

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Basal Cell Carcinoma

- Most common cutaneous malignancy found in humans
- Presenting complaint: bleeding or scabbing sore that heals and recurs
- Risk factors: fair skin, sun exposure, tanning salon, previous injury
- Incidence: Men > women: Incidence increases after age 40
Basal Cell Carcinoma

- Location: 85% appear on the head and neck; 25-30% on the nose alone
- Prognosis: Excellent because basal cell carcinomas rarely metastasize but will grow and spread to adjacent locations
- Very common for a 2nd or 3rd basal cell to appear

Basal Cell Carcinoma

- Six Clinical Types:
  - Nodular (21%): rounded mass
    - Most common form
    - Pearly white or pink
    - Telangiectatic vessels are present
    - Ulcerating center is common
    - May present as a nonhealing lesion
  - Superficial (17%): Least aggressive lesion
  - Pigmented: May resemble a melanoma

Basal Cell Carcinoma

- Six Clinical Types:
  - Cystic: Similar to nodular lesion
  - Sclerosing: Borders indistinct
    - May grow for years before recognized
    - May resemble a scar – depressed lesion
  - Nevoid: very rare; inherited as an autosomal dominant trait; Multiple BCC’s appear at birth
Basal Cell Carcinoma

- Treatment
  - Electrodessication
  - Excision
  - Cryosurgery
  - Mohs' micrographic surgery
  - Radiation
  - Imiquimod (superficial basal cells)
Squamous Cell Carcinoma

- Arises in the epithelium and is common in middle-aged to elderly population
- 2 types
  - Areas of prior radiation or thermal injury and in chronic ulcers: most likely to metastasize
  - Actinically damaged skin: Least likely to metastasize

Squamous Cell Carcinoma

- Risk factors
  - Sun exposure
  - Renal transplant recipients (253 fold increase secondary to immunosuppression)
  - Areas of chronic inflammation or thermal burns
- Location
  - Sun exposed regions: scalp, back of the hands, and superior aspect of the pinna

Squamous Cell Carcinoma

- Clinical Presentation
  - May arise from previous actinic keratosis
  - Thick, adherent scale with a red, inflamed base
  - Firm, movable, elevated lesion with a sharply defined border
  - Can spread locally and metastasize
Squamous Cell Carcinoma

Treatment
- Referral to dermatology or plastics depending upon location / availability
- Electrodessication
- Excision with margins
Malignant Melanoma

- Very dangerous cancer that arises from the cells of the melanocytic system
- Can metastasize to any organ including the brain
- Epidemic proportions - Lifetime risk: 1:90
- Risk factors
  - Sun exposure
  - Family history of melanoma
  - Immunosuppression

Malignant Melanoma

- ABCDE’s of Malignant Melanoma
  - Asymmetry
  - Borders
  - Color
  - Diameter enlargement
  - Enlarging or evolving

Malignant Melanoma

- Characteristics
  - Can be black, brown, red, white or blue
- Types
  - Superficial spreading
  - Lentigo maligna
  - Nodular melanoma
  - Acral lentiginous melanoma
Malignant Melanoma

Treatment
- Biopsy with elliptical excision only
- Shave excision and punch biopsy are NOT recommended
- Referral to dermatology/general surgeon/plastics depending upon access
- Surgical excision with margin clearing
  - 1-2 cm margin
  - Recent evidence that a 3 cm margin may improve survival rates
Thank You!
I Would Be Happy To Entertain Any Questions

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