Common Skin Disorders

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Objectives

• Identify common skin disorders
• Identify diagnostic steps of common skin disorders
• Discuss management of common skin disorders
• Introduce and discuss novel therapeutics

Overview

• Itchy skin: Eczema, Drug eruptions
• Inflammatory Diseases of the skin: Rosacea, Seborrheic Dermatitis, Bullous disease
• Infections and Infestations: Zoster, Scabies,
• Benign neoplasms: Seborrheic Keratoses, Cherry Angiomas
• Pre-malignant and malignant neoplasms: Actinic Keratoses, Basal Cell Carcinoma, Squamous Cell Carcinoma, Melanoma

Itchy Skin

• Xerosis/ Asteatotic Eczema
• Drug Eruption
• Thyroid Disease
• Diabetes
• Chronic Renal or Liver Disease
• Lymphoma
• Scabies

Asteatotic Eczema

• Low Humidity-winter, use of heaters
• Overbathing
• Failure to use emollients
• Decreased sebum production (intrinsic aging)
Asteatotic Eczema

Treatment
- Bathing with tepid, not hot, water
- Room humidifier

Asteatotic Eczema

Treatment
- Emollients over moist-wet skin (after bath or sponge bath)
  - Ointments: Aquaphor, Vaseline, Crisco shortening
  - Heavy creams: Eucerin, Theraseal, Cetaphil, Ceramides
  - Lotions: Eucerin, Cetaphil, Lubriderm
- Topical Corticosteroids for inflamed areas; avoid overuse

Itching: Pharmacological Considerations

- Hydroxyzine: Hepatic metabolism Lipophilic→ prolonged half life, may result in delirium, constipation
- Diphenhydramine: CYP inhibitor, exacerbates dementia by interacting with cholinesterase inhibitors

Stasis Dermatitis

- Previous trauma
- Circulatory changes
- Emollients
- Topical Steroids
- Compression stockings
- Avoid topical antibiotics

Exanthematous Drug Eruptions

- Most common type of cutaneous drug eruption
- Often seen in geriatric patients due to polypharmacy
- Most commonly occurs 1-3 weeks after initiation of drug; however, may occur at any time or with change in dosage

Exanthematous Drug Eruption

Clinical presentation:
- Erythematous macules and/or papules which may become confluent; symmetric distribution on trunk and extremities
- May become generalized exfoliative erythroderma
Exanthematous Drug Eruptions

Common culprits:
• Penicillins and cephalosporins
• Allopurinol
• Gold
• Carbamezepine
• Sulfonamides (including diuretics)
• NSAIDs
• Also, inquire about OTC and herbal supplements

Inflammatory Diseases of the Skin

Rosacea

• Etiology unknown
• Commonly begins after age 30
• Fair-skinned individuals
• Prone to flushing and blushing
• Often associated with sun-damaged skin
• Often associated with blepharitis or blepharoconjunctivitis

Rosacea

Trigger Factors
• Sun
• Heat/cold
• Stress, strong emotions
• Hot liquids (coffee, tea, soup)
• Hot spicy foods
• Alcoholic beverages
• Chemical Irritants

Rosacea- Treatment

Avoidance of Trigger Factors
• Mild cleansers and facial products
• Daily sunscreen
• Topical Metronidazole or Azeleic acid
• Applied once-twice daily

Rosacea-Treatment

Oral antibiotics
• Tetracycline 250mg-500mg BID
• Minocycline 50mg-100mg BID
• Doxycycline 50mg-100mg BID
• Alternative:
  • Erythromycin 250mg-500mg BID
Rosacea-Treatment

- May take 6-12 weeks to clear
- Some patients require oral antibiotics for years
- Others maintain with topicals alone

Rosacea-Treatment

Treatment of facial erythema: pulse dye laser and/or intense pulsed light, *brimonidine topical gel (alpha 2 adrenergic agonist)

Treatment of Rhinophyma: requires surgical or laser ablation

Seborrheic Dermatitis

- Infants and Adults
- ? Role of *P. ovale

Seborrheic Dermatitis

Severe in HIV and patients with neurologic diseases (e.g. Parkinsonism)

Psoriasis

- 3.2% of US adults
- 7.4 million adults in 2013 (JAAD March 2014)
- May be an independent risk factor for cardiovascular disease
- Higher rates of DM, HTN, hyperlipidemia, smoking, obesity, metabolic syndrome
- 25% with arthritis

Seborrheic Dermatitis

**Treatment:**
- **Topical Ketoconazole** 2% shampoo or cream
  - Lather shampoo and let sit for 3-5 minutes; scalp, ears, face, chest
  - Cream is applied twice a day
- Low potency **topical steroids** (classes VI-VII) may be used for flares x no more than 2 consecutive weeks
- Topical Non-steroidal immunomodulators (*Pimecrolimus or Tacrolimus*)
  - Off-label use

Psoriasis: Clinical

- Chronic Plaque
- Guttate
- Pustular
  - Generalized
  - Palmar/Plantar
- Erythrodermic

National Psoriasis Foundation Recommends:

- BP, pulse, BMI every 2 years
- Fasting blood glucose, lipid levels every 5 years if no additional risk factors, every 2 years with risk factors
- Joint status every visit

Psoriasis: Topical Treatment

- Topical steroids
- Calcipotriene/Vitamin D analogs
- Tar
- Anthralin
- Topical Retinoids
- Tacrolimus/Topical Calcineurin Inhibitors-off label

Psoriasis Treatment

- Phototherapy
- Methotrexate
- Retinoids
- Cyclosporine
- Mycophenolate Mofetil-off label
- Biologics
  - TNF alpha inhibitors (Etanercept, Infliximab, Adalimumab)
  - IL-12/23 inhibitors (Ustekinumab, Briakinumab)

Autoimmune Bullous Disorders: Bullous Pemphigoid

- Most common autoimmune bullous disorder
- Tense blisters, acral, flexural
- Subepidermal bullae
- Auto antibodies to BP antigens 230 (BPAg1) and 180 (BPAg2)
- Drug induced: NSAID’S, antihypertensives, diuretics, Penicillins
- Treatment: Corticosteroids

Bullous Pemphigoid

[Additional content or references provided here]

**Bullous Pemphigoid**

**Histopathology**
- Subepidermal blisters
- Eosinophils prominent

**Immunofluorescence**
- Linear deposition of IgG and complement

**Infections and Infestations**

**Verruca**
- Verruca vulgaris, Flat wart, Condyloma Acuminatum
- Treatment: Cryotherapy, Podophyllum, Retinoids, Cantaridin

**Molluscum Contagiosum**
- Round, pink papules 2-5mm
- Face, hands, abdomen, genitals
- Treatment: curettage, cryotherapy, cantharidin
- Spontaneous resolution (months to years)

**Herpes Zoster**
- Varicella-zoster Virus
- 2/3 of patients are over 50 years of age
- Risk factors: advanced age, malignancy, immunosuppression, xrt, HIV
Herpes Zoster

• 5% with non-specific prodromal symptoms
• Preceded by pain, paresthesia in the involved dermatome
  – Pain may mimic acute abdomen or MI

• May involve multiple dermatomes or may be generalized in immunosuppressed patients

Herpes Zoster

**Diagnosis** may be confirmed by:

• Tzanck smear – most rapid, non-specific
• Direct antigen detection – rapid, specific
• Viral culture

**Treatment**

• Ideally initiate within 48-72 hours of rash
• Oral antiviral agents:
  – Acyclovir 800mg 5x daily x 7-10 days
  – Valacyclovir 1gm TID x 7d
  – Famciclovir 500mg TID x 7d
  – IV Acyclovir for immunosuppressed patients

Herpes Zoster

**Treatment of Acute Pain:**

• NSAID's
• Short course of Opiates
• +/- Systemic corticosteroids

Pain usually improves over weeks to months

**Treatment of Post-Herpetic Neuralgia:**

• Oral Tricyclics
• Capsaicin cream
• Topical Anesthetics
• Nerve blocks
• Gabapentin- off label

Scabies

• Intensely pruritic infestation of *Sarcoptes scabei* mite
• Pruritus may be absent in older patients or those with dementia
• Common in nursing home populations
**Burrows**
- Intraepidermal linear or wavy plaques seen in scabies
- Caused by the tunneling of the female scabies mite

**Scabies**
- Interdigital, wrists, periumbilical, axillae, groin, penis and scrotum
- Excoriated, erythematous papules on trunk and/or extremities (represent hypersensitivity reaction)
- Face and scalp usually spared

**Crusted Scabies**
- Severe, long-standing infestation
- Often in immunocompromised patients

**Scabies**
- Diagnosis by skin scraping

**Scabies**
**Treatment:**
- Topical Permethrin
  - 2 treatments one week apart
- Oral antihistamine
- Alternative-Oral Ivermectin
- Treat contacts
Benign Neoplasms of the Skin

Seborrheic Keratoses
- Most common benign epithelial tumor
- Most commonly after age 30
- Etiology unknown
- Genetic predilection

Seborrheic Keratoses
Treatment (for irritated lesions):
- Cryotherapy with liquid nitrogen
- Light electrocautery
- Curettage
- Shave Excision

Cherry Angiomas
Usually appear after 30 years of age
Treatment:
- Electrocautery
- Pulse-dye laser

Purpura
- Associated with ASA and NSAID use
- Corticosteroids
- Photodamage

Courtesy of Merck Manual of Geriatrics
Pre-cancers and Skin Cancers

Risk Factors for Skin Cancer
- Fair skin, light hair, light eyes
- Living in a sunny climate
- Outdoor lifestyle
- No sunscreen use
- Personal history of actinic keratoses or skin cancer
- Family history of skin cancer
- Weak immune system due age, immunosuppression
- Exposure to radiation, burns or other carcinogens

Skin Cancer Statistics
- 1 in every 3 new cases of cancer diagnosed is a skin cancer
- 3.5 million new cases are diagnosed each year in the U.S.
- Nearly 10,000 people die from skin cancer each year in the United States
- Cure depends on early detection and treatment

Actinic Keratoses
- Pre-cancerous
- Marker of excessive sun damage to skin cells
- Progression to Squamous Cell Carcinoma estimated at 1 in 1000

Actinic Keratoses

Treatment:
- Cryotherapy with Liquid Nitrogen
- Curettage and electrodessication
- 5-fluorouracil-topical chemotherapy
- Immune-response therapy (Imiquimod)
- Photodynamic Therapy
- Biopsy any suspicious, recalcitrant or very hyperkeratotic lesion to rule out squamous cell carcinoma
Basal Cell Carcinoma

- Most common type of skin cancer-80%
- Most common form of cancer worldwide
- 2 million new cases per year in the U.S.
- 90% on face, ears, scalp
- Rarely metastasizes

Clinical Types:
- Nodular
  - Translucent, pearly papule with telangiectasias
  - Often with central erosion or ulcer (‘rodent ulcer’)
  - May be pigmented
- Superficial
  - Fixed, red, scaly plaque with ‘thread-like border’
- Morpheaform
  - Waxy, white sclerotic, scar-like plaque

Treatment:
- Cryotherapy
- Curettage and Desiccation
- Surgical Excision
- Mohs Micrographic Surgery
- Radiation
- Imiquimod Cream
- Vismodegib

Vismodegib

- Advanced basal cell carcinoma in poor surgical/radiation candidates
- Hedgehog pathway inhibitor
- Metabolized by CYP
- 150mg daily
- GI, fatigue, weight loss, muscle spasms, arthralgias

Squamous Cell Carcinoma

- Second most common type of skin cancer
- 16% of all skin cancers
- 700,000 new cases are diagnosed each year in the United States
- Predisposing Factors
  - Fair skin
  - Sun exposure
  - Industrial carcinogens (tar)
  - Arsenic exposure
  - Human papillomavirus
  - Immunosuppression

Clinical Types
- SCC in situ (Bowen’s Disease)
  - Erythematous, scaly plaque
- Nodular
  - Erythematous, hyperkeratotic papule or nodule
- Oral
  - White plaque or ulceration
  - Higher risk of metastasis
Squamous Cell Carcinoma

**Therapy**
- Cryotherapy
- Surgical excision
- Mohs Micrographic Surgery
- Radiation

Melanoma

- 4% of skin cancers; 70% of deaths from skin cancer
- Incidence: By 2015 1 in 50 in the United States in their lifetime
- Estimated 138,000 new cases anticipated this year
- Estimated 9,480 deaths anticipated this year
- National Cancer Institute report of cancers from 1990-1996. Overall decrease in number of new cancers, but there is an increase in the number of melanomas-3% annually

Melanoma

- May arise de novo or in a pre-existing mole
- **Risk factors**
  - Personal or Family History of melanoma
  - Fair skin
  - Sun exposure (esp childhood sunburns)
  - Presence of dysplastic nevi

Melanoma-Types

- **Superficial Spreading Melanoma** (70%)
- **Nodular Melanoma** (15-30%)
- **Lentigo Maligna Melanoma** (10%)
- **Acral Lentiginous Melanoma** (<10%)
- Early detection is essential
- Tumor thickness is most important prognostic factor

Melanoma-Therapy

- Diagnosis by *excisional biopsy*
- **Treatment:**
  - Surgical excision with margins dependent on tumor thickness
  - Lymph node evaluation for intermediate and thick lesions
  - Adjuvant chemotherapy and immunotherapy may be considered

Stage IV Melanoma

- Ipiilimumab (Intravenous)
  - low response, durable response, toxic
- Vemurabenib (Oral): target therapy for patient with BRAF mutation
  - improves survival, rapid response
  - BRAF mutation decreases with age
Summary

• Identify common skin disorders
• Know appropriate diagnostic steps
• Manage common skin diseases
• Familiar with novel therapeutics