Common Dermatologic Disorders

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مخاطب: خانم جوانی وارد داروخانه میشود و وقتی به جلوی کانتر رسید می پرسد برای خارش پوست بتامتازون خوبه؟

تکنسین داروخانه: بله

مخاطب: یک دونه بدید

تکنسین داروخانه: کرم میخواهید یا پماد؟

مخاطب: فرقی داره؟

تکنسین داروخانه: بله، پماد چربتره، برای کجا میخواهید؟

مخاطب: پماد بدید

تکنسین داروخانه: بله، بفرمایید، تشریف ببرید صندوق

مخاطب: چنده؟

تکنسین داروخانه: ۴۵۰۰ تومن

مخاطب: خارجیش نیست؟

تکنسین: اگر بهترش را می خواهید مگاکورت ببرید، اون ۶۵۰۰ تومنه

مخاطب: باشه اونو بدید

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مخاطب: خانم جوانی وارد داروخانه میشود و وقتی به جلوی کانتر رسید می پرسد برای خارش پوست بتامتازون خوبه؟

تکنسین داروخانه: اگر راهنمایی دارویی می خواهید تشریف ببرید پیش آقای دکتر

مخاطب: سلام آقای دکتر، ببخشید برای خارش پوست پماد بتامتازون بهتره یا قرص؟

شما: سلام، بله، بفرمایید برای خودتون میخواید؟

مخاطب: نه برای دخترمه

شما: بفرمایید چند سالشونه؟

مادر بیمار: ۱۰ سال

شما: بفرمایید داروی خاصی مصرف می کنند؟

مادر بیمار: دخترم تشنج میکنه کاربامازپین ۲۰۰ روزی دوتا میخوره

شما: بسیار خوب، بفرمایید غیر از کاربامازپین چی؟

مادر بیمار: ویتامین دی و بعضی وقتها هم شربت تقویتی زینک و کلسیم بهش میدم

شما: بفرمایید، چه مشکلی پیش اومده که بتامتازون می خواهید تا من راهنمایی بهتری بکنم.

مادر بیمار: روی ..... قرمز شده و میخاره

شما: از کی؟

مادر بیمار: فکر کنم دو سه روزی هست

شما: تشریف دارند خودشون؟

مادر بیمار: خونه است

شما: اگر ممکنه خودشون را بیارید من ببینم

مادر بیمار: حتماً لازمه؟

شما: بهتره از نزدیک ببینم

مادر بیمار: باشه الان میرم بیارمش، شما تا کی هستید؟

شما: تا ساعت ۹ شب

حدود بیست دقیقه بعد مادر بیمار به همراه بیمار میرسند.

شما: تشریف داشته باشید این نسخه را بدهم الان میام

شما: بیمار را به گوشه ای از داروخانه که ارتفاع کانتر کمتر است دعوت میکنید.

شما: خوب، دختر قشنگم چی شده؟

بیمار: تنم میخاره

شما: کو، ببینم؟


B

The Skin

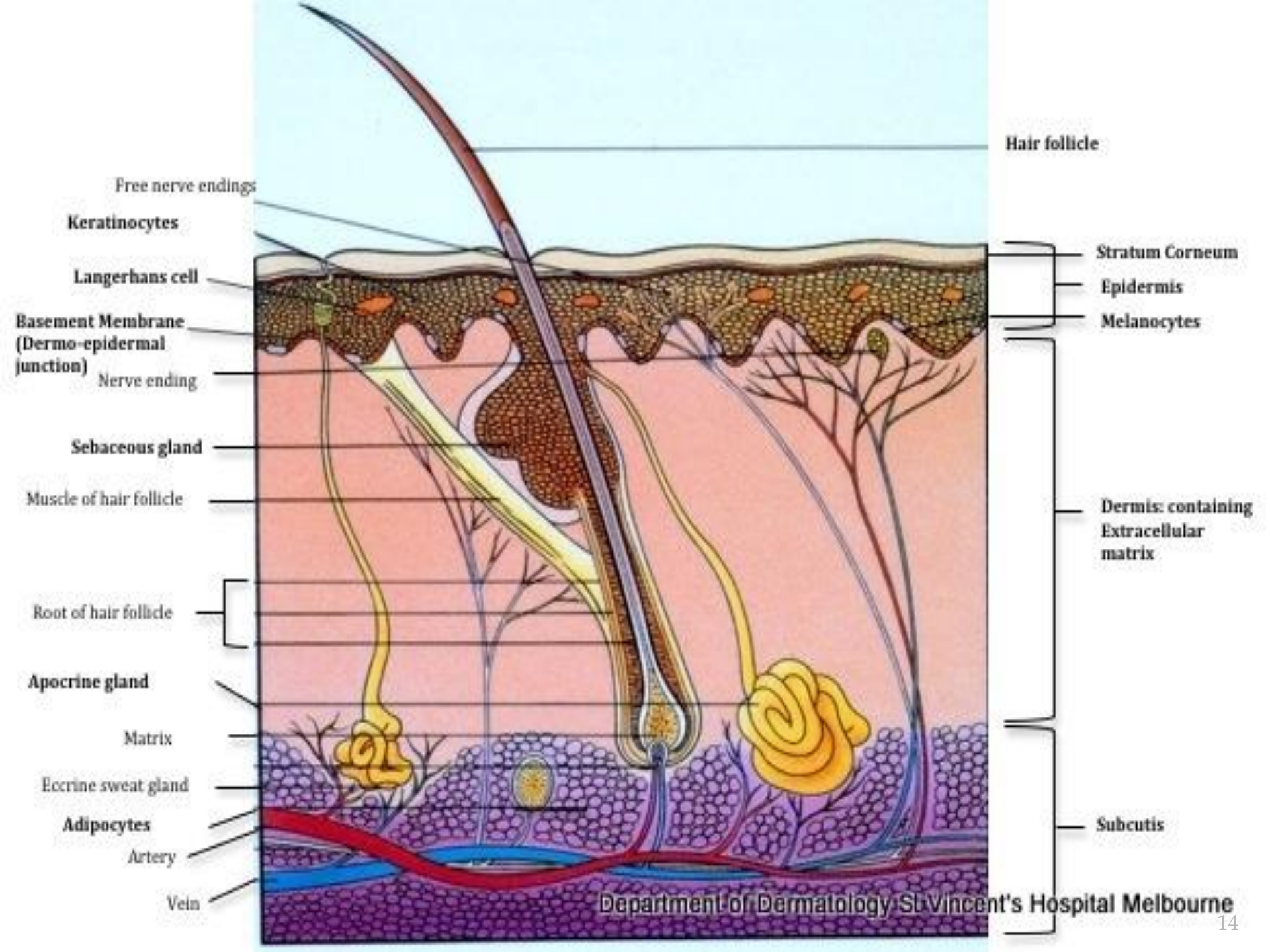
- The skin is a Vital Organ
- Largest organ of the human body
- A“protective wrap”
- Regulates body temperature
- Keeps harmful substances & microorganisms from entering body
- Senses pain
- Provides a shield from harmful effects of the sun

The Skin

- Indicates malfunction within the body through color changes
  - Blue (Cyanosis): Lack of O_2- ↓ Perfusion, CO Poisoning
  - Yellow (Jaundice): ↑ Bilirubin
  - Redness: Polycythemia, Fever
  - Whitening (Pallor): May indicate anemia or Hypotension

Skin Structure

- Each layer of skin performs specific tasks
- Outermost layer is the epidermis consists of stratified or squamous epithelium
- Top layer of epidermis contains keratin, a tough, fibrous protein that protects skin from harmful substances
- Bottom layer of epidermis contains melanin, dark pigment in skin that protects body from harmful rays of the sun


Hair follicle
Free nerve endings
Keratinocytes
Langerhans cell
Basement Membrane (Dermo-epidermal junction)
Nerve ending
Sebaceous gland
Muscle of hair follicle
Root of hair follicle
Apocrine gland
Matrix
Eccrine sweat gland
Adipocytes
Artery
Vein
Stratum Corneum
Epidermis
Melanocytes
Dermis: containing Extracellular matrix
Subcutis
Department of Dermatology St Vincent's Hospital Melbourne

Classifications Of Skin Diseases

- Skin diseases are identified and classified according to characteristic lesions (size, shape, color & location)
- Pruritis: Itching
- Edema: Swelling
- Erythema: Redness
- Inflammation: Usually accompany lesions with pain

Rash

- A change in the skin (color, appearance, or texture)

Macule

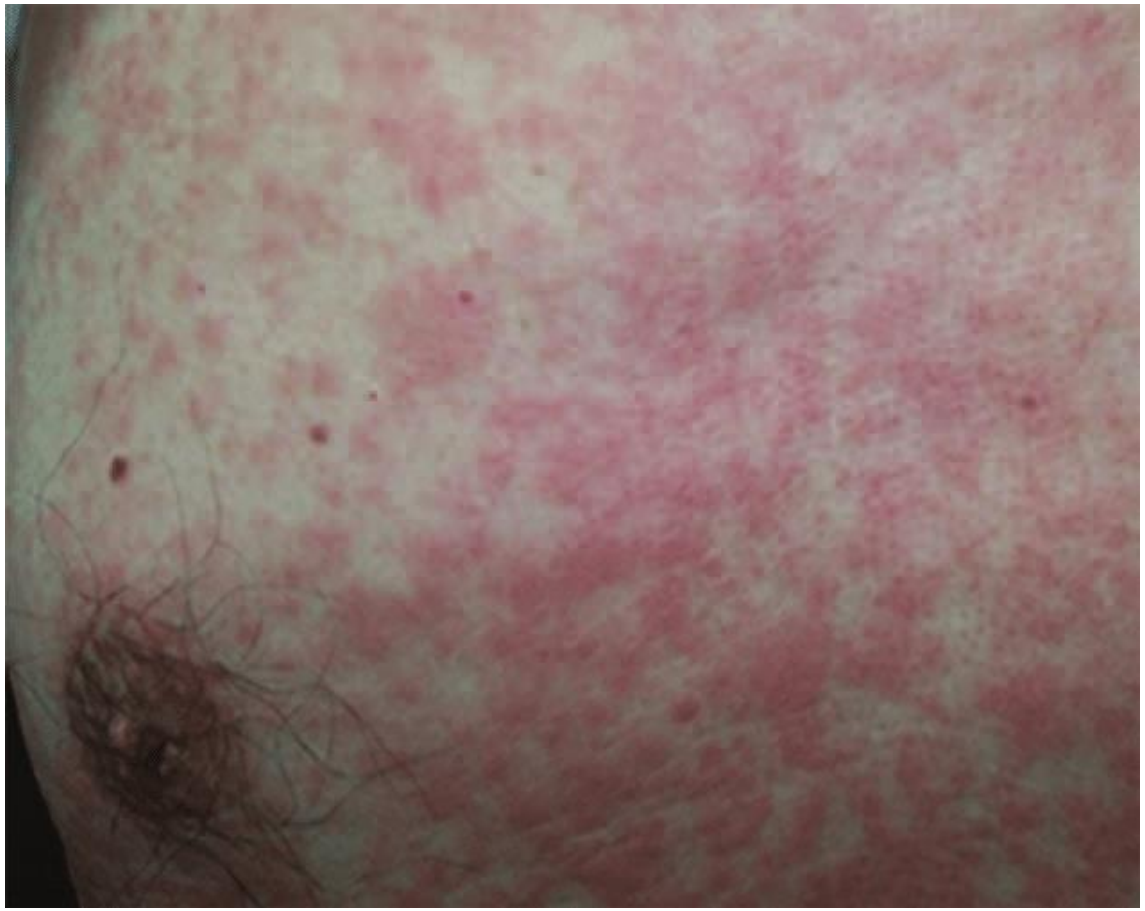
Flat, well demarcated lesion characterized mainly by color change

Papule

Small elevated solid bump

Maculopapular Rash

Flat to slightly raised colored bumps



Plaque

- Elevated flat-topped lesion larger than 1 cm

Vesicle

- Elevated lesion filled with clear fluid

Bulla

Large wide vesicle

Pustule

- Small elevated lesion filled with purulent fluid (Pus)

Cyst

- Raised, encapsulated lesion, usually solid or semisolid when palpated

Furuncles

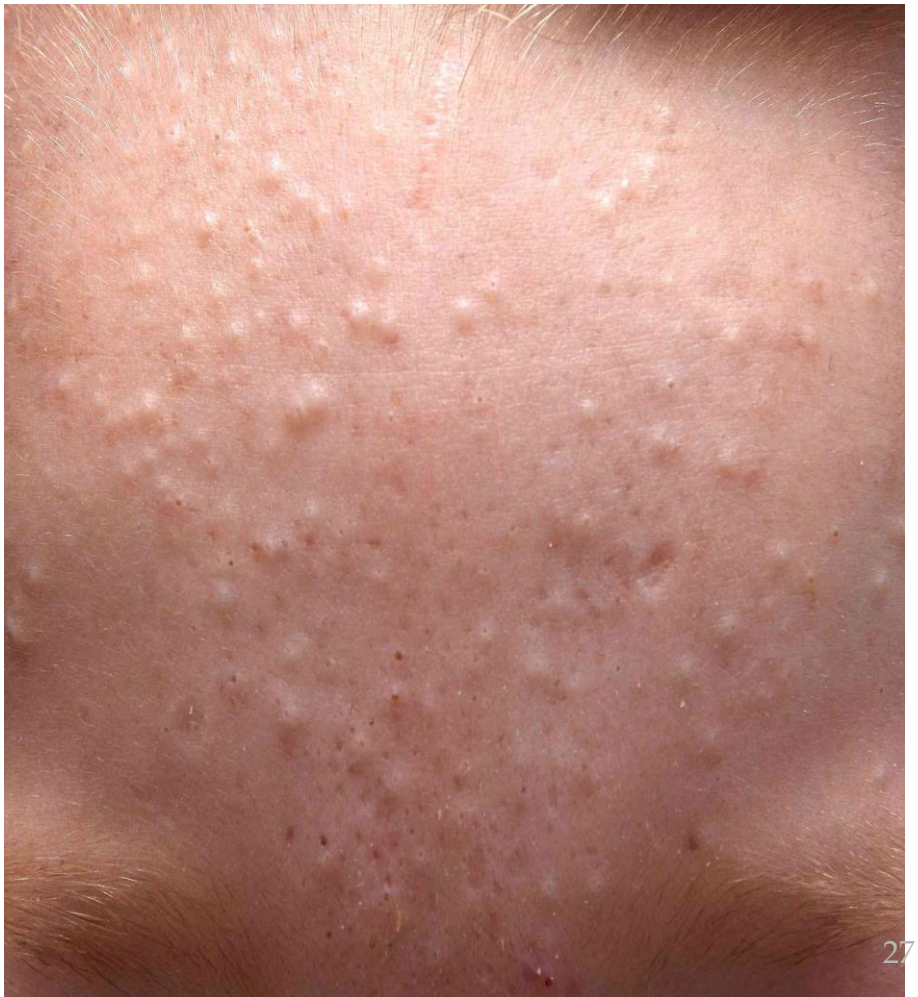
- Extended redness, pus, swelling and tenderness

Carbuncles

Numerous sites of draining pus, usually in areas of thicker skin

Comedo

- Clogged hair follicle (pore) in the skin



Milia

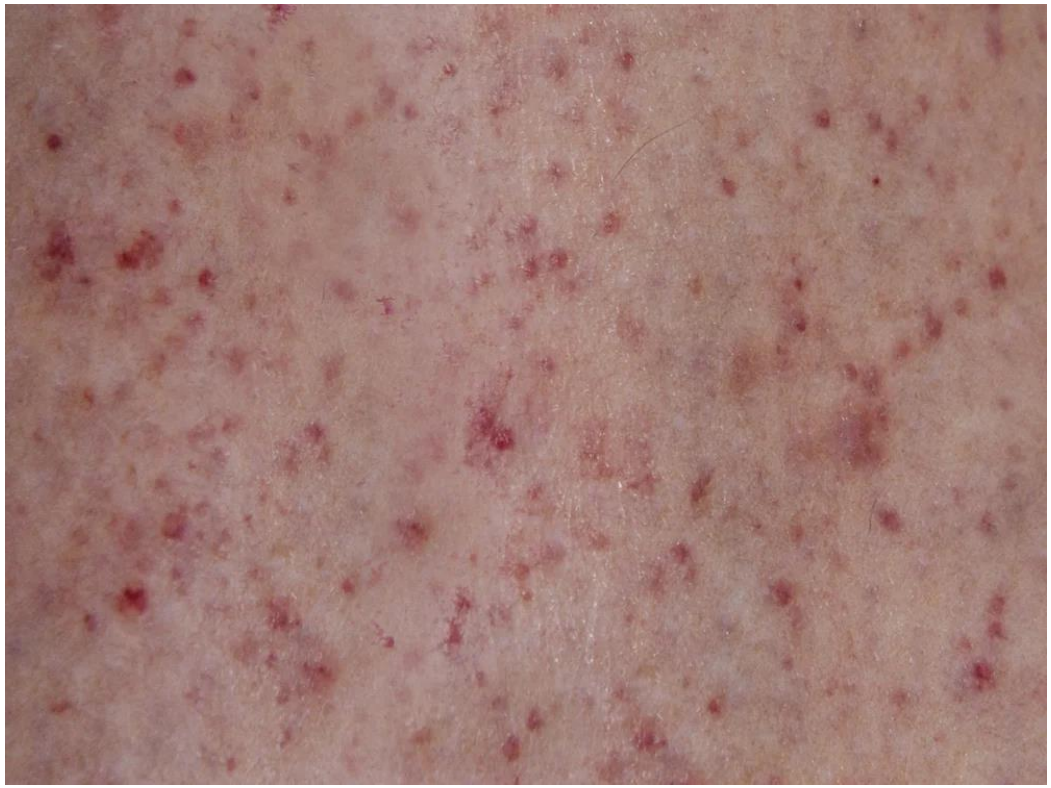
- Small, dome-shaped bumps that are usually white or yellow

Purpura

- Reddish purple discoloration due to blood in small area of tissue. Dose not blanch when pressed

Petechiae

- Small purpura



Scale

- Flaky portions of skin separated from deeper portions

Chicken Pox

- Varicella-zoster virus (VZV) is one of eight herpesviruses known to cause human infection and is distributed worldwide
- Primary infection with VZV causes varicella (chickenpox) in susceptible hosts.
- Adolescents, Adults, Pregnant Women, & Immunocompromised are risk full hosts.
- Pathognomonic Sign?

Transmission & Diagnosis

- Chickenpox is highly contagious, with secondary household attack rates of >90%
- Contact with aerosolized droplets from nasopharyngeal secretions or direct cutaneous contact with vesicle
- Primary infection occurs during childhood and is usually a benign self-limited illness
- Varicella can be a severe disease in adolescents, adults, and immunosuppressed or immunocompromised individuals of any age.
- Secondary cases in household contacts appear to be more severe than primary cases

Complications

- Primary varicella infection in children has been associated with an increased incidence of invasive group A streptococcal soft tissue infection
- Encephalitis and, mostly in the past, Reye syndrome, are the most serious complications of VZV infection
- TORCH?

Treatment

- Many patients require supportive care to manage these symptoms
- Antiviral therapy depends upon the age, comorbid conditions & the clinical presentation
- For healthy children ≤12 Y, is self-limited
- Antiviral therapy reduce the severity of the disease in high risk situations

Supportive Care

- Antihistamines are helpful for the symptomatic treatment of pruritus.
- Fingernails should be closely cropped to avoid significant excoriation and secondary bacterial infection
- Acetaminophen should be used to treat fever, particularly in children.
- Nonaspirin NSAID can also be used
- NSAIDS use may have association with streptococcal super-infection

Antiviral Therapy

- Acyclovir and its analogue (valacyclovir) are effective for the treatment of primary varicella in both healthy and immunocompromised hosts
- Higher doses of acyclovir are used to treat VZV compared with herpes simplex virus

Antiviral Therapy

- Immunocompetent children
  - Unvaccinated adolescents (ie, children ≥13 years of age)
  - Secondary cases in household contacts
  - Patients with a history of chronic cutaneous or pulmonary disorders
  - Children taking intermittent oral or inhaled steroid therapy

Timing & Regimen

- Treatment should be started within 24 hours after the rash develops
- Acyclovir: 20 mg/kg per dose (maximal dose 800 mg) four times daily for five days for children 2-12 years and for adolescents.
- Valacyclovir: 20 mg/kg per dose (maximal dose 1000 mg) three times daily for five days.
- **Secondary bacterial infection?**

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Shingles

- Herpes zoster, also known as shingles, results from reactivation of endogenous latent VZV infection within the sensory ganglia
- This clinical form of the disease is characterized by a painful, unilateral vesicular eruption
- Herpes zoster can occur at any age, it is mainly a disease of adults >60 years of age

Management

- Antiviral therapy to hasten healing of cutaneous lesions
- Analgesia for patients with moderate to severe acute neuritis
- Antiviral effect:
  - Lessen the severity and duration of pain associated with acute neuritis
  - Promote more rapid healing of skin lesions
  - Prevent new lesion formation
  - Decrease viral shedding to reduce the risk of transmission
  - Prevent PHN

Treatment

- Antiviral therapy for patients with uncomplicated herpes zoster who present within 72 hours of clinical symptoms
- We administer antiviral therapy after 72 hours if new lesions are appearing
- Valacyclovir: 1000 mg three times daily for seven days
- Acyclovir: 800 mg five times daily for seven days
- **Pregnancy?**

Infectious Folliculitis

- Folliculitis refers to inflammation of the superficial or deep portion of the hair follicle
- The classic clinical findings of superficial folliculitis are follicular pustules and follicular erythematous papules on hair-bearing skin
- Folliculitis may be infectious or, less frequently, noninfectious. Various bacteria, fungi, viruses, and parasites are causes of infectious folliculitis

Staphylococcus Aureus

- Is the most common cause of bacterial folliculitis
- Pruritus is the most common symptom associated with folliculitis Steroid folliculitis?
- Because *S. aureus* folliculitis is the most common form of bacterial folliculitis, patients are often empirically treated for this infection

Treatment

- Treatment of staphylococcal folliculitis is not always necessary; mild folliculitis with few pustules often resolves spontaneously
- Topical antibiotic therapy is sufficient for many cases of bacterial folliculitis
- The first-line agents are topical mupirocin and topical clindamycin
- Topical erythromycin?

Oral Treatment

- Patients with extensive skin involvement
- Patients with staphylococcal folliculitis that is recurrent or refractory after topical therapy
- A 7- to 10-day course is usually sufficient.
- First-line:
- Cloxacillin (250-500 mg four times per day)
- Cephalexin (250-500 mg four times per day)

Impetigo

- Impetigo: is an acute, contagious infectious disease, common in children
- Caused by streptococcal & staphylococcal organisms in the nose & passed to the skin
- Erythema, reddened area develops and oozing vesicles and pustules form
- Area ruptures & yellow crust covers lesion
- Face & hands most frequently affected
- Fever & enlarged lymph nodes may present

Ecthyma

- It is a deep form of impetigo, as the same bacteria causing the infection are involved.
- Ecthyma causes deeper erosions of the skin into the dermis
- Should always be treated with oral therapy

Treatment

- Treatment of impetigo is important for reducing spread of infection, hastening the resolution of discomfort, and improving cosmetic appearance
- Topical therapy is used for patients with limited skin involvement
- Oral therapy is recommended for patients with numerous lesions

Treatment

- Mupirocin is applied three times daily
- The recommended length of treatment is five days
- Cloxacillin and cephalexin are appropriate treatments because *S. aureus* isolates from impetigo and ecthyma are usually susceptible to methicillin
- Patients with suspected or confrmed methicillin-resistant *S. aureus* (MRSA) infections can be treated with doxycycline, clindamycin, or trimethoprim-sulfamethoxazole

Herpes Simplex Virus Type 1 (Labialis)

Approach

- The management of HSV-1 infection in the immunocompetent host depends on:
  - Whether the patient has primary infection or reactivation disease
  - The severity of symptoms
  - The site of infection (eg, oropharynx versus central nervous system)
  - The frequency of recrudescence

Management

- Acyclovir has the greatest in vitro activity against HSV-1 and HSV-2
- Treatment with topical formulations requires frequent daily applications (eg, acyclovir five times a day)
- Prompt initiation of therapy within 72 hours is important to obtain maximal clinical benefit
- Acyclovir: 400 mg PO three times per day or 200 mg PO five times per day
- Valacyclovir: 1000 mg PO twice daily


Cold Sore

Dermatophyte (Tinea) Infections

- Dermatophytes are the prevailing causes of fungal infection of the skin, hair, and nails
- Nystatin, an effective treatment for *Candida* infections, is not effective for dermatophytes
  - Tinea pedis
  - Tinea cruris
  - Tinea capitis
  - Tinea unguium (dermatophyte onychomycosis)

Pearls

- Oral treatment with agents such as terbinafine, itraconazole, fluconazole, and griseofulvin is used for extensive or refractory cutaneous infections and infections extending into follicles or the dermis or involving nails.
- Patients should **not** be treated with oral ketoconazole because of risk for severe liver injury, adrenal insufficiency, and drug interactions.

Pearls

- Use of combination antifungal and corticosteroid (eg, betamethasone-clotrimazole) is discouraged
- Corticosteroid therapy is not necessary for achieving cure
- Use of a topical corticosteroid introduces risk for topical corticosteroid-induced skin atrophy
- Treatment failures have also been reported

Tinea versicolor (Pityriasis versicolor)

- Is a common superficial fungal infection
- Patients with this disorder often present with hypopigmented, hyperpigmented, or erythematous macules on the trunk and proximal upper extremities
- Saprophytic, lipid-dependent yeasts
- Normal skin fora

Treatment

- Tinea versicolor responds well to medical therapy, but recurrence is common and long-term prophylactic therapy may be necessary
- Topical antifungal medications, topical selenium sulfide, and topical zinc pyrithione are effective and well-tolerated first-line therapies for Tinea versicolor

Treatment

- Topical therapy is the treatment of choice for patients with tinea versicolor.
- Systemic therapy is reserved for patients with widespread or recurrent tinea versicolor, or for patients who have failed topical therapy

Ketoconazole

- **Azole antifungals** – Small randomized trials support the effcacy of various topical azole antifungals
- In one randomized trial, ketoconazole 2% cream applied once daily for 11 to 22 days
- The shampoo formulation of ketoconazole appears to be effective with a shorter duration of therapy

Treatment

- Terbinafine – Topical terbinafine 1% solution applied twice daily
- Topical selenium sulfide exerts antifungal activity primarily through the promotion of shedding of the infected stratum corneum
- Oral azole antifungals such as itraconazole and fluconazole are effective for the treatment of tinea versicolor

Cutaneous Warts (Common, Plantar & Flat Warts)

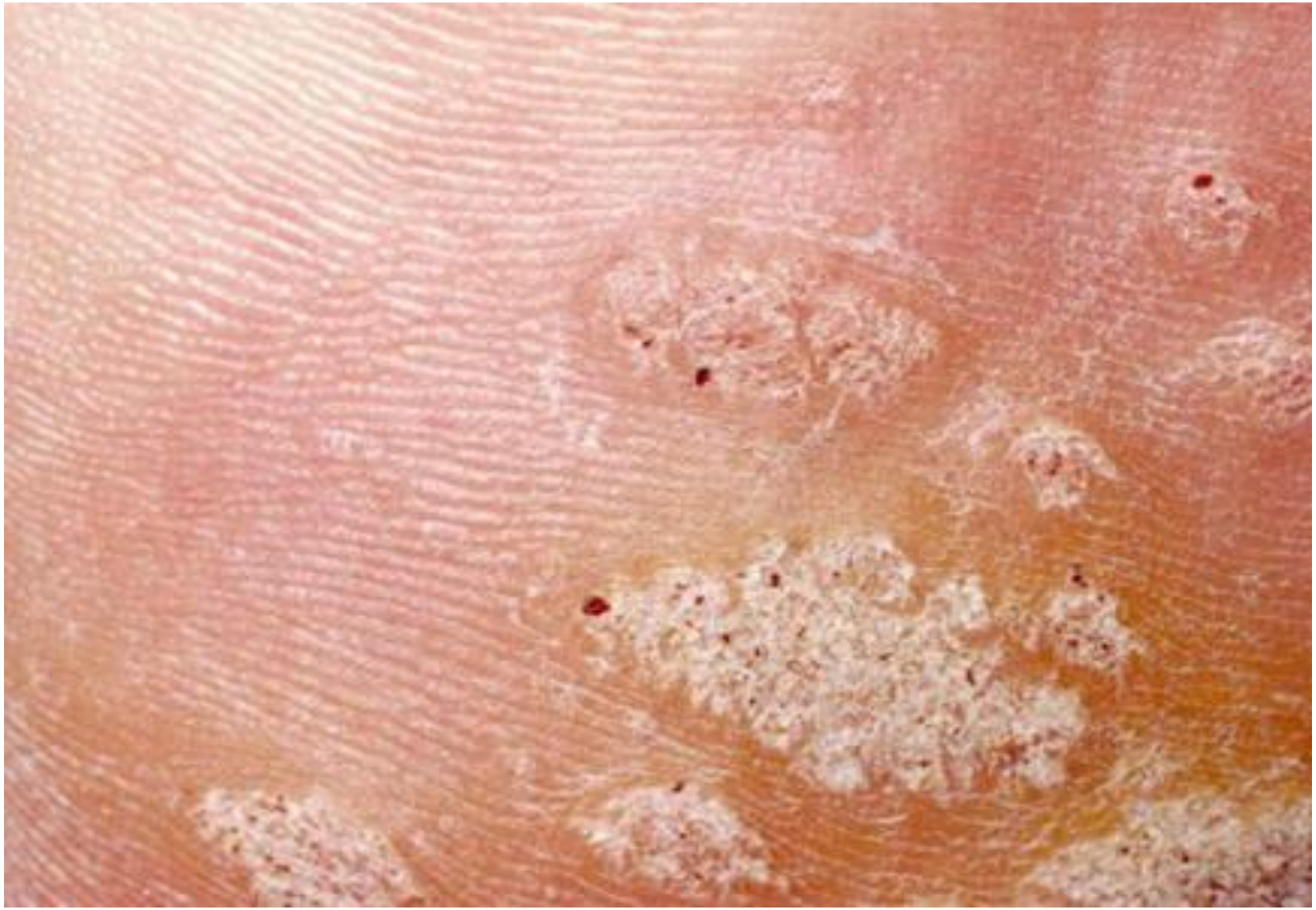
- Human papillomaviruses (HPVs) infect epithelial tissues of skin and mucous membranes
- There are over 150 distinct HPV subtypes; some tend to infect specific body sites
- HPV type 1 commonly infects the soles of the feet and produces plantar warts, while HPV types 6 & 11 infect the anogenital area

Flat Warts

Verruca Vulgaris

Periungual Warts

Plantar Warts



Filiform Warts

Epidemiology

- Cutaneous warts occur most commonly in children & young adults & are more common among certain occupations (handlers of meat, poultry, & fish)
- Predisposing conditions for extensive involvement: Atopic dermatitis & conditions associated with decreased cell-mediated immunity (AIDS, organ transplantation)

Transmission

- Infection with HPV occurs by direct skin contact, with maceration or sites of trauma
- Warts in patients with intact cellular immunity are the most likely to regress without therapy
- Recurrence is common

Diagnose

- The diagnosis of cutaneous warts is based upon clinical appearance.
- Paring of overlying hyperkeratotic debris & thrombosed capillaries
- Rarely, a biopsy is indicated to confirm the diagnosis
- Differential diagnosis: Corn, Acrochordon, Lichen planus & Lichen nitidus, Malignancy

Corn

- A corn (also known as clavus) may obscure normal skin lines but lacks thrombosed capillaries

Acrochordon (Skin Tag or Soft Fibroma)

Pedunculated skin-colored papules

Lichen Planus

- A symmetric distribution, Wickham's striae, & oral involvement

Lichen Nitidus

- Numerous 1 to 2 mm smooth papules that have a rounder appearance than flat warts

Squamous Cell Carcinoma

Amelanotic Melanoma

Reason for Treatment

- Treatment of cutaneous warts may not be necessary and spontaneous resolution may occur (in children)
- Reasons for treatment:
  - Associated pain, discomfort, or functional impairment
  - Patient concern for cosmesis stigma
  - Persistent wart(s)
  - Immunosuppression (Risk factor for extensive, resistant warts)

Management

- Chemical or physical destruction of affected tissue (eg, salicylic acid, cryotherapy, trichloroacetic acid, surgery, laser)
- Patient education
- Topical salicylic acid and cryotherapy with liquid nitrogen are the most common treatments for common and plantar warts

Salicylic Acid (SA)

- Topical SA exfoliates the affected epidermis and may also stimulate local immunity
- Advantages of SA: self-administration, painless application, and minimal serious side effects
- 17-50%
- 40-50% concentrations are usually reserved for application to sites with a thick stratum corneum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Striae (Stretch Marks)

- Common form of dermal scarring that appear on the skin as erythematous, violaceous, or hypopigmented linear striations
- Often develop in sites experiencing rapid increases in girth
- Striae rubra eventually progress to striae alba within 6-10 m.

Interventions

- **Pulsed dye lasers**, fractional lasers, & topical retinoids
- For patients with striae rubra, pulsed dye lasers is better for initial treatment because these lasers target hemoglobin and a reduction in erythema
- Topical tretinoin is a useful alternative; however, adherence to several months of daily application is usually required and skin irritation is common

Laser

- Striae alba are often managed with **fractional laser** therapy because this treatment may improve skin texture and hypopigmentation
- Treatment results are unpredictable and vary from no improvement to significant improvement in patients treated with similar regimens
- Laser therapy is usually performed every four to six weeks. Purpura lasting one to two weeks is a potential side effect.

Miliaria

- A common, transient cutaneous disorder caused by blockage within the eccrine sweat duct
- Inflammation of the eccrine sweat duct are the cause of all types of miliaria
  - Hot and humid environments
  - Strenuous physical activity
  - Febrile illness
  - Occlusion of the skin

Management

- The management of miliaria consists of measures designed to minimize exposure to factors that may stimulate or e
  - Move patient to a cooler environment, if possible
  - Wear breathable clothing (such as cotton) that does not occlude the skin
  - Remove occlusive bandages in the affected area and use more porous alternatives, if needed
  - Treat fever with antipyretics

Exanthematous (Morbilliform) drug eruption

Wheal or Urticaria:

Rash (an ADR)

Classification of allergic reactions (Gell and Coombs)

Type	Description	Mechanism	Clinical features
I Immediate reaction (30 to 60 min) Accelerated reaction (1 to 72 hours)	Anaphylactic, immediate-type hypersensitivity	Antigen exposure causes release of vasoactive substances, such as histamine, prostaglandins, and leukotrienes from mast cells or basophils. This response is usually, but not always, IgE-dependent.	Anaphylaxis Angioedema Bronchospasm Urticaria (hives)
II	Antibody-dependent cytotoxicity	An antigen or hapten that is intimately associated with a cell binds to antibody, leading to cell or tissue injury.	Hemolytic anemia Interstitial nephritis
III	Immune complex disease	Damage is caused by formation or deposition of antigen-antibody complexes in vessels or tissue.	Serum sickness
IV	Cell-mediated or delayed hypersensitivity	Antigen exposure sensitizes T cells, which then mediate tissue injury.	Contact dermatitis
V (>72 hours)		Uncertain, but probably involving T cell cytotoxicity.	Maculopapular rash

Insect Bites

- Should be washed with soap and water Reduction of local edema may be induced with cooling (ice or cold pack)
- Topical creams, gels, and lotions, such as those containing calamine or pramoxine, decrease pruritus
- Nonsedating oral antihistamines, such as cetirizine (10 mg once a day) or loratadine (10 mg once a day), may be helpful for patients with troublesome itching

Insect Bites

- For troublesome itching. The sedating agent hydroxyzine (10 to 25 mg every four to six hours, as needed) may be helpful for controlling pruritus in adults.
- H1 and H2 antihistamines may be used concurrently

Melasma

The treatment of melasma can be challenging because of its chronic and relapsing nature. Patients should be educated about the importance of adopting sun protection measures, including sun avoidance, wearing a wide-brimmed hat, and using broad-spectrum sunscreens, during and after treatment

Treatment

- Treatments include skin-lightening agents, chemical peels, and laser and light-based therapy.
- Because no single therapy has proven to be beneficial for all patients with melasma, combinations of agents or modalities are often used, especially in recalcitrant cases.

Athlete's Foot (Tinea Pedis):

Pediculosis:

Good Luck