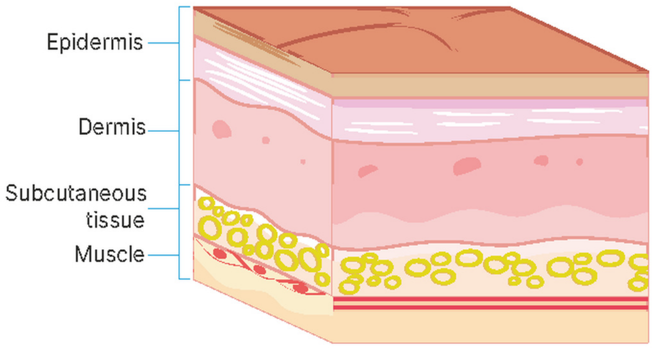
1 BASICS OF DERMATOLOGY

Layers of Human Skin

- Epidermis(VVIP), Dermis, Subcutaneous tissue (Hypodermis)



Layers of Epidermis "Come, Let's Get Sunburned"

- Stratum Corneum
- Stratum Lucidum
- Stratum Granulosum
- Stratum Spinosum
- Stratum Basale

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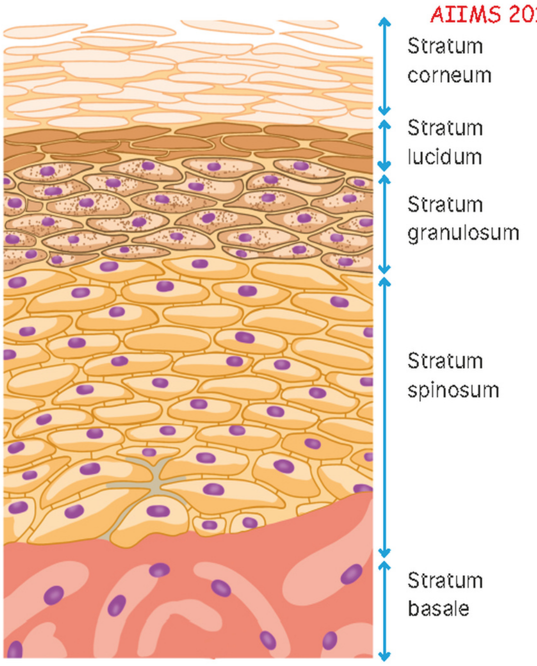
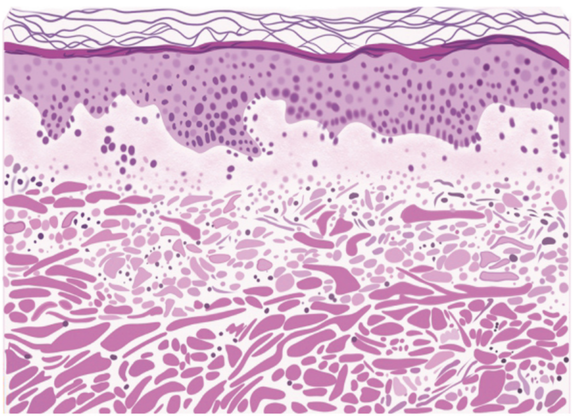
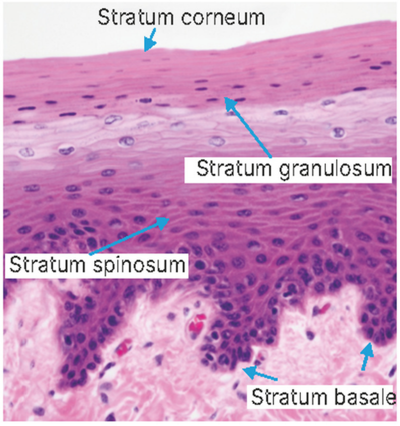


Histopathology





Cell Differentiation

- As keratinocytes migrate from basale → corneum, the following changes occur:

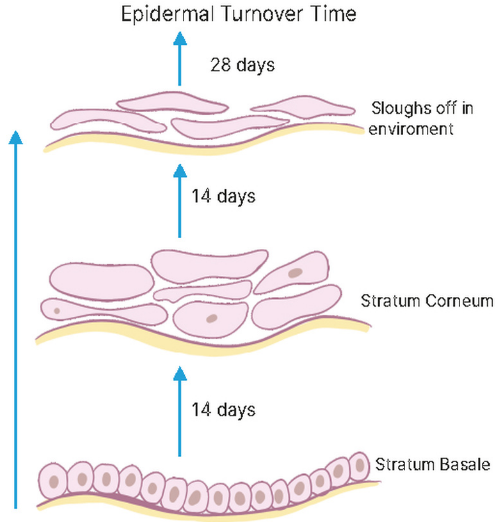
Yourwish

- Flat
- Increase size
- Loss of nuclei
- Dehydrated

Q. Which epidermal layer is absent in a premature baby?
Ans: Stratum Corneum

Cell Kinetics

- Epidermal Turnover Time (ETT) : 56 days(52-75 days)
  - A cell Takes ~14 days to reach stratum corneum
  - A cell Takes another ~14 days to shed
  - The entire epidermis renews in ~56 days
- In psoriasis, turnover time reduces to 36hrs ~4 days

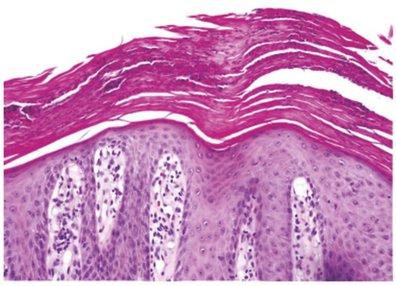


Stratum Corneum

- Dead keratinocytes
- Provides barrier function
- No nucleus
- No mitosis
- Usually 3-4 layers thick

Parakeratosis

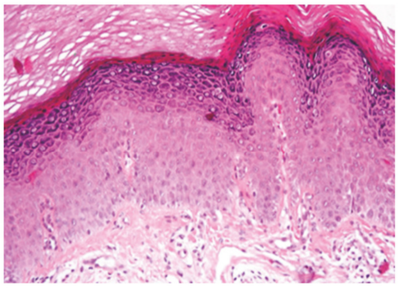
- Retention of nuclei in stratum corneum
- Indicates abnormal keratinization



Physiological	Pathological (PEAS)
• Oral mucosa • Vaginal epithelium	• Psoriasis • Eczema • Actinic keratosis • Seborrheic dermatitis

Hyperkeratosis

- Increased thickness of stratum corneum
- Seen in chronic dermatoses



Yourwish

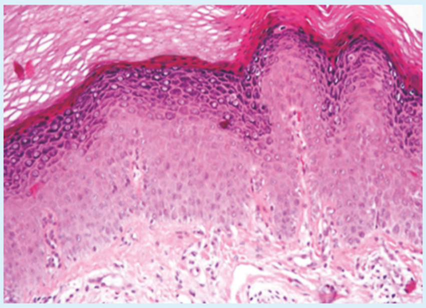
Stratum Lucidum

- Present only in palms and soles
- Clear cell layer
- Refractive granules of Eleidin

Stratum Granulosum

GRANULES

- Pro-fillagrin(keratohyalin) → forms fillagrin
  - Defect → Ichthyosis vulgaris
- Odland bodies (lipid coatedgranules)
  - Defect→ Asteatotic eczema

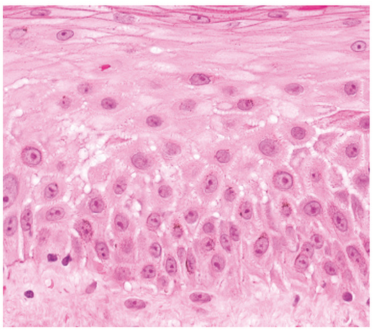
Hypergranulosis 	Thickened granular layer	Lichen planus (wedge-shaped)
Agranulosis	Absent granular layer	Psoriasis
Dyskeratosis	Abnormal keratinization	• Benign: Darier disease, Hailey-Hailey disease • Malignant(**BSP**) : **BCC**, **SCC**, **Paget's** disease

Stratum Spinosum

- Thickest layer
- Prickle cell layer
- Desmosomes, giving "spiny" appearance

Pathological Changes

	Feature	Seen in
Spongiosis	Intercellular edema	Acute eczema
Ballooning	Intracellular edema	Acute eczema
Acanthosis	Thickened spinosum	Chronic eczema



Malpighian Layer

- Combination of stratum basale + stratum spinosum

Stratum Basale

- Single layer
- Germinative cell layer

Pathological Changes

• **Acantholysis** ○ Seperation of keratinocyte) ○ Can occur in SB, SP, SC	Pemphigous disorders
• **Basal cell degeneration**	Lichenoid disorders(lichen planus)

Microabscesses

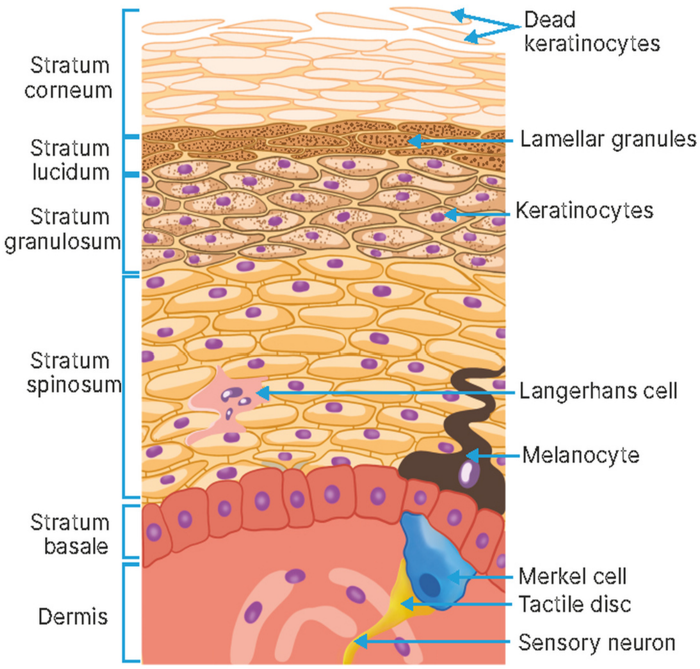
00:17:30

Microabcesses are small collections of inflammatory cells.

Type	Location	Cells	Disease
Munro microabscess	S. corneum	Neutrophils	Psoriasis
Kogoj pustule	S.Spinosum	Neutrophils	Psoriasis
Papillary microabscess	Papillary dermis	Neutrophils	Dermatitis herpetiformis
Eosinophilic microabscess	DE junction	Eosinophils	Bullous pemphigoid
Pautrier microabscess	Epidermis	Lymphocytes	Mycosis fungoides

Cells Of The Epidermis

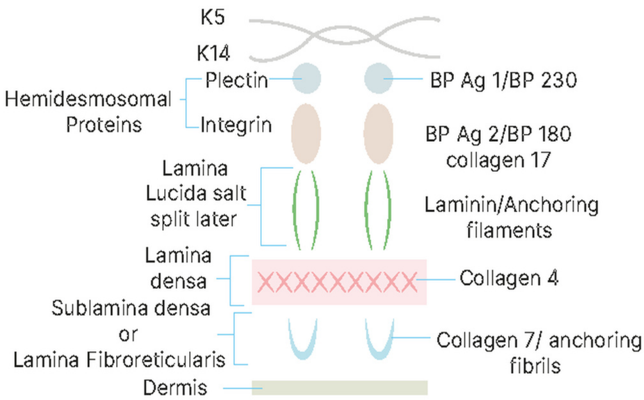
00:19:18



Cell	Layer of skin	Origin	Major function
Keratinocytes	All	Ectoderm	Structural integrity
Langerhans cells	S.Spinosum	Mesenchyme	APC(Birbeck granules,CD1a positive)
Melanocytes (epidermal melanin unit)	S.Basale	Neural crest	Pigment formation 1 : 36 keratinocyte(EMU)
Merkel cells	S.Basale	Neural crest >ectoderm	Touch receptors(slow adapting)

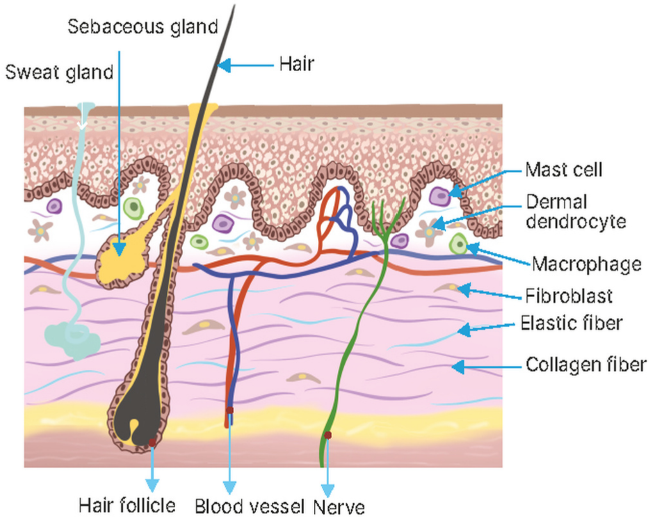
Dermo-Epidermal Junction (Basement Membrane Zone)

- Connects epidermis to dermis
- Important for adhesion and signaling
- Type IV collagen
- Anchoring fibrils contain Type VII collagen



Dermis

- Type I and III Collagen
- 2 Parts
  - Papillary
  - Reticular
- Most abundant fibres: Collagen
- Most abundant cells: Fibroblast
- Ground substance: Hyaluronic acid
- Touch receptors : Meisner's corpuscle



Collagen In Skin

- Type I: The most abundant type, offering significant penile, strength, and structure to the dermis, making up 80 to 85% of dermal collagen
- Type III: often found with type I, crucial for elasticity, especially in younger skin, and prominent in early won't repair before being replaced by type I
- Type IV: forms sheet like networks within the basement membrane, the layer supporting skin cells, (epithelium)
- Type V : found in skin, hair, and cell surfaces, helping regulate cell growth
- Type VII: forms, anchoring fibres that attach the epidermis to the dermis

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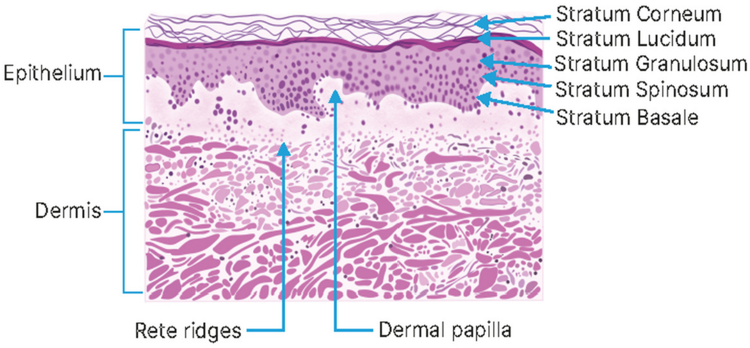
Skin Appendage

- Hair
- Nails
- Glands

Surface Anatomy Of Skin

- Dermal papillae: dermis projecting upward
- Rete ridges: epidermis projecting downward



Yourwish

Skin Lesions In Dermatology

00:27:44

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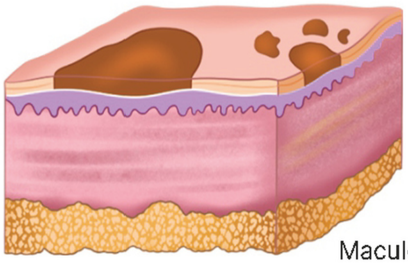
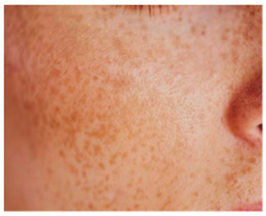
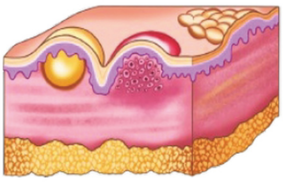
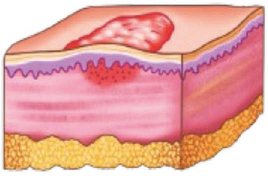
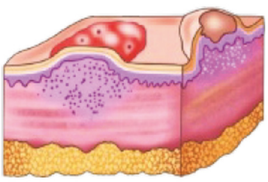
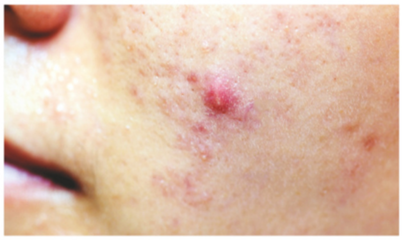
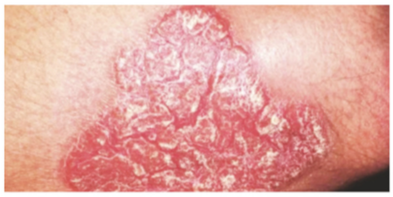
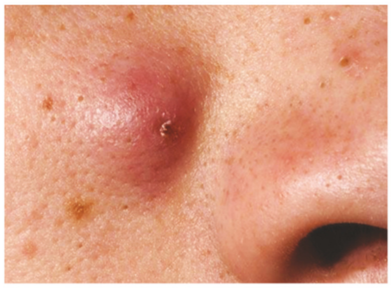
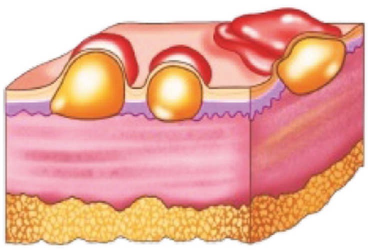
NEET PG 2018, 2024
FMGE 2018, 2025

- Primary lesions
- Secondary lesions
- Special lesions

Primary Skin Lesions

Category	Lesion	Defining Feature / Size	Image
• Change in skin colour • Neither raised nor depressed	Macule	Flat, < 0.5 cm	 Macule and Patch  
	Patch	Flat, > 0.5 cm	
Circumscribed solid elevated lesion   	Papule	Solid, raised, < 0.5 cm	  
	Plaque	Solid, raised, > 0.5 cm	
	Nodule	Solid lesion (Depth>height)	
Fluid-filled lesions Pustule:Pustule can be primary or secondary 	Vesicle	Fluid-filled, < 0.5 cm	
	Bulla	Fluid-filled, > 0.5 cm	
	Pustule (primary and secondary)	Pus-filled lesion	

Yourwish

Vesicles

Bullae

Blood Extravasation

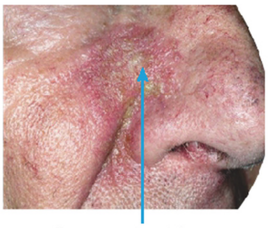
- Petechiae - small - 1-2mm
- Purpura - Medium - >3mm
- Ecchymosis - large - 2cm

Secondary Skin Lesions - Scales

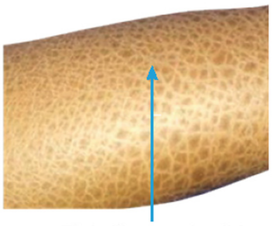
AIIMS 2020, NEET PG 2018, 2024, FMGE 2018, 2025

Scale Type	Disease
Silvery white	Psoriasis
Greasy	Seborrheic dermatitis
Fish-like	Ichthyosis
Fine bran-like	Pityriasis versicolor
Collarette (trailing)	Pityriasis rosea

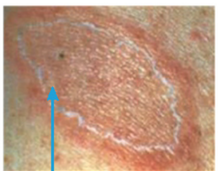
Silvery white: Psoriasis



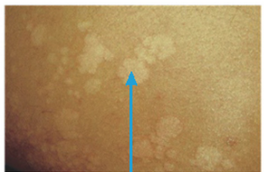
Greasy looking: Seborrhoeic dermatitis



Fish like scale: IV



Trailing collarette of scales: P. rosea



Branny Scales: P. versicolor

Crust

- Crust is formed by dried exudate, which may consist of:
  - Serum
  - Pus
  - Blood

Type of Crust	Appearance	Disease
Honey-colored crust	Golden yellow	Impetigo contagiosa
Hemorrhagic crust	Blood-stained	Herpes infections

Lichenification

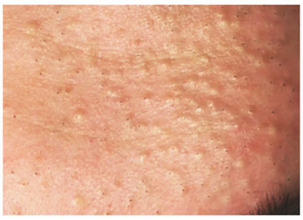
AIIMS 2020
NEET PG 2018, 2024
FMGE 2018, 2025

- Seen in chronic eczema.
- Characteristic Features (3 Key Changes)
  - Increased skin markings
  - Skin thickening (induration)
  - Increased pigmentation
- Histopathology: Acanthosis

Special Skin Lesions

Lesion	Description	Disease
Burrow	Thin, serpiginous tunnel	Scabies
Open comedone	Blackhead	Acne vulgaris
Closed comedone	Whitehead	Acne vulgaris
Target lesion	Concentric rings	Erythema multiforme

Target lesion



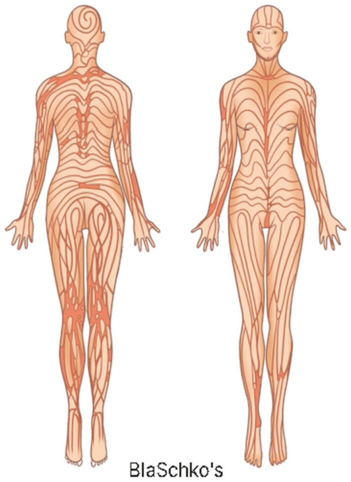
Comedone

Borrow

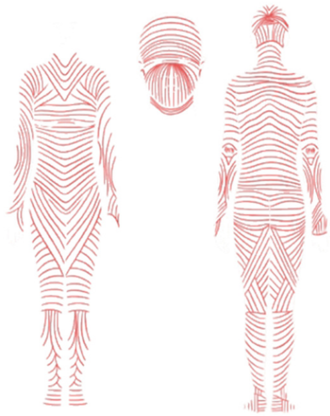
Important Dermatological Lines

00:35:50

BlaSchko's Lines	Langer's Lines
Curvy, S-shaped, whorled	Straight(Linear), oblique
Lines of embryological development	Orientation of collagen & muscle
Constant throughout life	Not constant
Midline demarcation	Help in giving insicion
	AKA Relaxed Skin Tension Lines (RSTL)



BlaSchko's



Langer's

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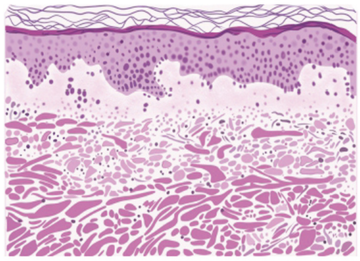
MCQs

00:37:44

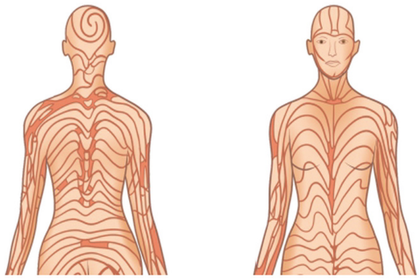
Q.which cell is absent from the layer indicated with an arrow?



A. Keratinocyte
B. Merkel cell
C. Melanocyte
D. Langerhans cells

Ans. D

Q.what are these lines called?



A. lymphatic development
B. Dermatomes
C. Blaschko lines
D. Vascular development

Ans. C

Q. Identify the type of skin lesion.

A. Nummular
B. Annular
C. Discoid
D. Target

Ans. B

Q. Please match the following types of scales with their corresponding lesions.

1. Collarette scales	A. Pityriasis versicolour
2. Silvery scales	B. Pityriasis Rosea.
3. Mica-like scales	C. Psoriasis
4. Branny scales	D. Pityriasis Lichenoides

1- B, 2 - C, 3 - D, 4- A
1 - A, 2 - B, 3 - D,4 - C
1 - D, 2-C, 3-A, 4 - B
1- B,2 - C, 3 - D, 4 - A

Ans. D

Q. Which one of the subsequent options represents a primary skin lesion
A. Crust
B. Atrophy
C. Purpura
D. Induration

Ans. C

.

2 VIRAL INFECTIONS OF THE SKIN

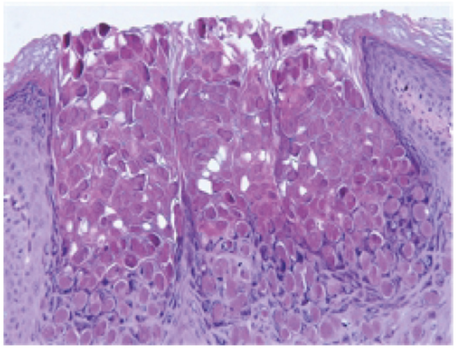
MOLLUSCUM CONTAGIOSUM

00:00:50

FMGE 2019, INICET 2018

- Caused by the Molluscum contagiosum virus
  - Family- Molluscipox virus
  - Largest known DNA virus
- Presentation
  - Asymptomatic umbilicated papules, usually on the face
  - Pseudokoebner is present due to autoinoculation of the virus
  - Family history may be present
  - More common in immunocompromised patients or HIV patients

- Histopathology
  - Handerson Patterson bodies (HP bodies)- Intracytoplasmic eosinophillic inclusion bodies

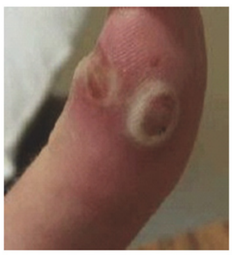


- Treatment
  - Self-limiting- In young patients, single lesion
  - Chemically- Trichloroacetic acid/Potassium hydroxide
  - Physically- Electrocautery, lasers, Radiofrequency, needle extirpation
  - Systemic- Levamisole, Cemetidine

Important Information
- Koebner's phenomenon is positive in Psoriasis, Vitiligo, and Lichen planus
- Pseudokoebner is present in Molluscum contagiosum and warts

Other Poxvirus Infections

00:05:05

Ecthyma contagiosum	Milker's nodule
• Caused by Parapox/Orf virus • Zoonotic infection- Sheep • Seen in livestock handlers/ sheep **Presentation** • Seen on the exposed surface of the body/extensors • Erythematosus plaque with necrotic centre 	• Caused by the Pseudopox virus • Seen in people who rear cows **Presentation** • Seen on the exposed surface of the body/extensors • Erythematosus plaque with necrotic centre 

HUMAN PAPILLOMA VIRUS (HPV)

00:06:47
NEET PG 2018, 2022

- Causes warts
- HPV is a non-enveloped DNA virus with carcinogenic potential
- Subtypes **(Mnemonic: DSP Come Eat A Burger)**
  - **D**eep plantar- 1
  - **S**uperficial plantar- 2
  - **P**lane- 3, 10
  - **C**ommon-4, 2, 27
  - **E**DV- 5, 8
  - **A**nogenital: Low risk- 11; high risk- 16, 18, 31, 33, 45
  - **B**utcher warts- 7

Common Warts

00:09:33

- AKA Verruca vulgaris
- Caused by 4, 2, 27 HPV subtype
- Presentation: Hyperkeratotic, rough-looking papules called Verrucous
- Asymptomatic
- Pseudokoebener phenomenon is present

Plane Warts

00:10:55

- AKA Verruca plana
- Presentation
  - Warts are plane-looking/ plane surface
  - Presents on the face in immunocompromised/HIV patients

Epidermodysplasia Verruciformis (EDV)

00:12:02
FMGE 2020

- Caused by HPV 5, 8 subtypes
- Autosomal recessive
- Genetic tendency to widespread HPV infection
- Increased risk of squamous cell carcinoma
- 3 features/3 types of lesions
  - P. versicolor
  - Plane warts
  - Reddish plaques

Anogenital Warts

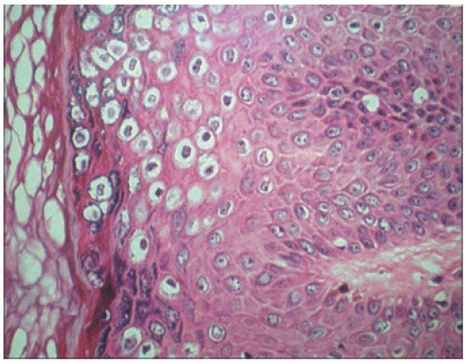
00:13:45

- Type of STI
- Often referred to as Condyloma acuminata
- Warts are broad-based and have pointed edges
- Softer flat base

Histopathology of HPV

00:14:40

- AKA Koilocytes/ clear looking Keratinocytes- Perinucleae halo



Treatment of HPV

00:15:23

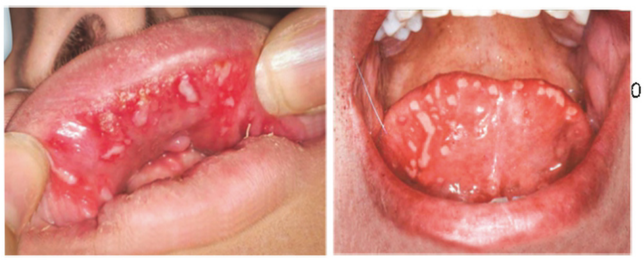
- No effective oral treatments
- Mainstay treatment is the destruction of warts using:
  - Topical methods, Chemical, Physical, & Cryotherapy
- Pregnant patients- Cryotherapy > TCA > lasers

First line	Second line	Third line
• Salicylic acid • Glutaraldehyde • Formalin • Occlusion • Topical 5-fluorouracil • Caustics • Retinoic acid • Vitamin D analogues	• Cryotherapy (liquid nitrogen) • Laser • Hyperthermia • Surgery • Photodynamic therapy	• Podophyllin and podophyllotoxin (used for anogenital warts) • Imiquimod (used for anogenital warts) • Topical immunotherapy • Intralesional immunotherapy • Interferon • H_2 receptor antagonists • Zinc • Oral retinoids • Intralesional bleomycin • Cidofovir • Psychological methods

HSV 1 & 2

00:17:45

- Herpes simplex virus
  - HSV 1- Above waist infection
  - HSV 2- Below waist infection (Herpes Genitalis)
- Latency after primary infection in the dorsal root ganglion
  - Reactivation causes recurrent infections
- Primary infections- Severe, widespread & painful
- Latent infection- Infection is transmissible



Herpetic Gingivostomatitis

- Caused by HSV-1
- M/c cause of gingivostomatitis in children
- Presentation

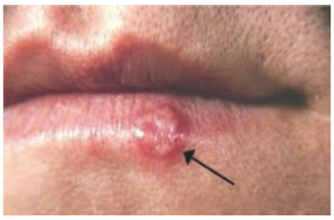
  - Painful, grouped vesicles and coalescing erosions
  - Associated with fever, lymphadenopathy, and other systemic symptoms
- Treatment: Acyclovir 200 mg x 5 times/day

Herpes Labialis

00:21:40

NEET PG 2020

- AKA cold sore
- Caused if the virus is latent in the trigeminal ganglion
- Occurs at the Vermillion border of the lips
- Presentation
  - Grouped vesicles on the border of the lips
  - H/o Recurrence after fever, immunocompromised state, menstrual cycle, stress



Genital Herpes

00:23:07

- Sexually transmitted infection
  - Primary
  - Recurrent
  - Subclinical (latent state)- Transmissible to partner
- Presentation- Painful, grouped vesicles and coalescing erosions

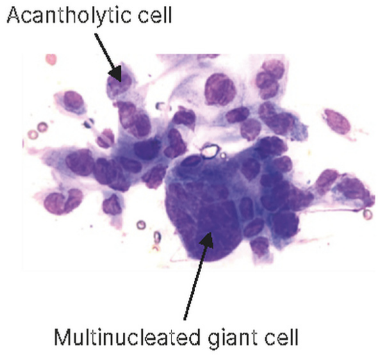
Herpetic Whitlow

- Fingertips are affected
- Seen in Livestock handlers, healthcare workers

Diagnosis

00:24:22

- Tzanck smear- Preparation
  - Deroot the vesicle
  - Using the blunt end of the scalp, a smear is taken from the base of the vesicle
  - Mount on the slide and stain it with Giemsa stain
- Observation
  - Multinucleate giant cells
  - Separated Keratinocytes called Acantholytic cells



Important Information

- Tzanck smear is also used in Pemphigus, but only Acantholytic cells are observed

TREATMENT

00:26:10

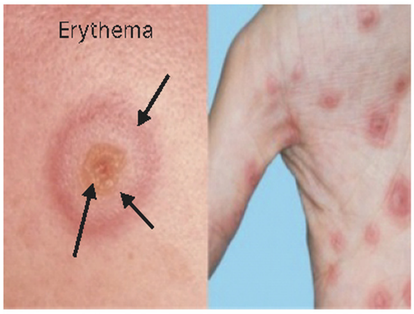
Antiviral	Primary (10 days)	Recurrence (5 days)	Suppressive (6 mths-1 yr)
Acyclovir	200 mg x 5 times/day	400 mg TID	400 mg BD
Valacyclovir	1 g BD	500 mg BD	500-1000 mg BD
Famciclovir	250 mg TID	125 mg BD	250 mg BD

- Recurrence: >6 episodes/year
- Acyclovir-resistant cases: Foscarnet, Cidofovir

Erythema Multiforme

00:27:50

- Presentation: Target lesions on extremities
  - Central zone- Vesicle
  - Zone of edema
  - Zone of erythema
- In 90% cases, it occurs after viral infections
- In 10% cases, it occurs after taking drugs
- M/c infectious cause: HSV



Eczema Herpeticum

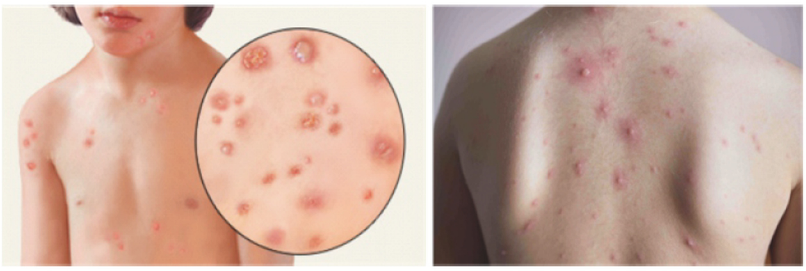
00:29:43

- AKA Kaposi varicelliform eruption
- HSV infection on eczema
- Seen in patients with pre-existing dermatoses
- Steroids would flare this condition
- Presentation: Widespread vesicles
- Treatment: Acyclovir

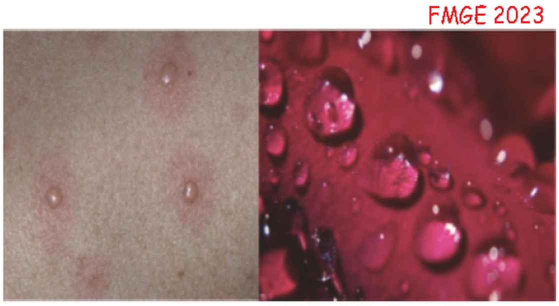
VARICELLA/CHICKEN POX

00:31:23

- Causative agent: Varicella zoster virus
- Causes
  - Varicella/Chicken pox- Seen in children
    - → Tends to be latent
  - Herpes zoster- Seen in Adults
    - → Seen after reactivation of the virus
- Incubation period: 14-17 days
- Population: children
- Presents with constitutional symptoms
  - Prodrome: Fever, cold, sore throat
  - Skin lesions
    - → Polymorphic: Macules, papules, vesicles, crusts
    - → Morbiliform: Rose red in colour
    - → Centripetal: Trunk to peripheries
- Lesions appear as "Dew drop on rose petal."
- Highly infectious
- Treatment
  - Symptomatic
  - Antiviral- In adults & complications



FMGE 2023



Herpes Zoster

00:35:21

- Reactivation of the latent virus in the dorsal root ganglion after varicella infection
  - Immunocompromised state
  - Severe illness

NEET PG 2018, FMGE 2023

- Immunosuppressants
- Dermatomal distribution
  - U/L distribution of the lesions
  - Lesions: Painful vesicles on an erythematous base

00:37:14

Herpes Zoster Ophthalmicus

- Hutchinson's sign: Herpes zoster lesions on the tip of the nose lead to Herpes zoster ophthalmicus
- Indicates involvement of the nasociliary nerve
  - Branch of the ophthalmic division of the Trigeminal nerve

Treatment

INICET 2019, 2023

- Acyclovir: 800 mg x 5 times/day; start ASAP <72 hrs
- Analgesics

Post Herpetic Neuralgia

00:39:22

- Persistent pain, tingling, irritation, or various nerve symptoms after healing of herpes zoster due to underlying nerve inflammation
- Criteria: >1 month or >3 months of persistence of symptoms after healing of herpes zoster
- Treatment: Gabapentin or Pregabalin

EPSTEIN-BARR VIRUS

00:40:30

Infectious Mononucleosis

FMGE 2019, 2023

- AKA Glandular fever/Kissing disease
- Presentation: Fever, lymphadenopathy, sore throat
- Ampi rash: Exanthem observed more frequently after ingestion of Amoxicillin/Ampicillin

Oral Hairy Leukoplakia

- More common in HIV patients
- Presentation
  - Lateral border of the tongue
  - Verrucous leukoplakia or verrucous white plaque, which cannot be scraped off

HHV-6 & 7

00:43:00

- Human herpes virus
- Causes
  - Pityriasis rosea
  - Trigger factor for Lichen planus
  - Roseola infantum

00:43:22

Roseola Infantum

- AKA Exanthem subitum
- Sudden rash appearing in patients <2 yrs
- Presentation

- Abrupt fever
- Appearance of a sudden red rash after the fever settles

Pityriasis Rosea

00:44:15

NEET PG 2019, INICET 2022

Herald patch

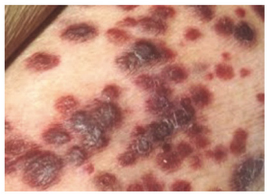
Christmas tree appearance

- **Mnemonic- HRCT**
  - **H:** HSV 6& 7, Herald patch; Hanging curtain sign
  - **R:** Resolve on own
  - **C:** Collarette of scale, Christmas tree appearance
  - **T:** Trunk
- Herald patch- 2 weeks following upper respiratory/GI infection, appearance of first lesion
  - Large, circular, erythematous rash on the trunk
  - Hanging curtain sign- A peculiar scale called the Collarette of scale
  - Usually non-itch
- 2 weeks after the Herald patch → Appearance of secondary lesions
  - Christmas tree appearance- Small red rash on the trunk along the lines of cleavage

HHV-8

00:48:15

INICET 2023



- Causes Kaposi sarcoma
- Also seen in HIV
- Vascular tumour of endothelial cells
- Presents in the legs, mucosa, internal organs → Deep red, volaceous papules & nodules

PARVOVIRUS B19

00:49:10

INICET 2023

- Causes Erythema infectiosum/5th disease
- Presentation:
  - Slapped cheek appearance- Child presents with turgid erythema on the cheek
  - Reticular exanthem on the trunk

Major disease caused by Parvovirus B19

Disease	Acute or chronic	Host
Fifth disease	Acute	Normal children
Arthropathy	Acute or chronic	Normal adults

Transient aplastic crisis	Acute	Pts with increased erythropoiesis
Persistent anemia	Chronic	Immunodeficient and immunocompromised patient
Hydrops fetalis & congenital anemia	Acute or chronic	Fetus

ENTEROVIRAL DISEASE

00:50:36

Hand Food and Mouth Disease

INICET 2022, 2023

- Presentation:
  - Child presents with vesicles on the hand, foot, and mouth disease on an erythematous base
  - Fever, Sore throat, & URI
- Causative agent- Coxsackie A16 virus

MCQs

00:51:40

Q. What is the diagnosis for a patient who has multiple painful blisters on an erythematous base, aligned along a dermatome on the trunk, as depicted in the provided image?

A. Herpes simplex
B. Herpes zoster
C. Molluscum contagiosum
D. Chicken pox

Ans. **B.** Herpes zoster

Q. What is the diagnosis of a painless oral lesion and white patch in the oral cavity, as depicted in the provided image, in a 50-year-old individual who smokes and seeks medical attention at the hospital?

A. Leukoplakia
B. Candidiasis
C. Lichen planus
D. Oral cancer

Ans. **A.** Leukoplakia

Yourwish

Q. A 3-year-old child is brought to the clinic with a generalized vesicular rash covering the entire body. The child's parents report that the rash started as red spots and quickly developed into fluid-filled blisters. The child also has a mild fever and is feeling irritable. What is the most likely diagnosis for this child's condition?

A. Varicella
B. Shingles
C. Smallpox
D. Dermatomyocytis

Ans. A. Varicella

Q. Which of the subsequent options is not associated with the manifestation of a maculopapular rash?
A. Zoster (shingles)
B. Rubella
C. Dengue (during febrile phase)
D. Measles

Ans. A. Zoster (shingles)

Q. A mother has a pearly white papule on her forehead, which her infant also develops. What is the cause?
A. HPV
B. Pox virus
C. Adenovirus
D. Herpes virus

Ans. B. Pox virus

Q. What is the most frequently encountered cause of the mentioned condition?

A. Vaccination
B. Malignancy
C. Drugs
D. Infection

Ans. D. Infection

Q. What is the accurate statement regarding Herpes zoster?
A. The lesions are not infectious
B. Trigeminal dermatome is most commonly affected
C. Anterior nerve roots are more commonly involved
D. Mucous membranes within the affected dermatomes are involved

Ans. D. Mucous membranes within the affected dermatomes are involved

Q. What advice would you provide to prevent the transmission of active genital warts in a female patient with a history of recurrence, despite her husband not being affected by it?
A. Give continuous prophylaxis to the patient

Yourwish

B. Give prophylactic anti-virals to the husband
C. Give anti-virals whenever active lesions are present
D. Don't involve in intercourse when active lesions are present
Ans. **D.** Don't involve in intercourse when active lesions are present

Q. Which of the following does not exhibit the Koebner phenomenon?
A. Vitiligo
B. Psoriasis
C. Lichen planus
D. Herpes

Ans. **D.** Herpes

LAST-MINUTE REVISION POINTS

00:57:22

- Henderson-Patterson bodies: Molluscum contagiosum
- Common warts: HPV 4, 2, 27
- Plane warts: HPV 3, 10
- MNGs + acantholytic cells seen in Herpes
- Dew drop on rose petal appearance: Varicella/Chicken pox
- Hutchinson's sign: Herpes zoster ophthalmicus
- Oral hairy leukoplakia: EBV, lateral border of the tongue as a white plaque
- Kaposi sarcoma: HHV-8, vascular endothelial tumour
- Hand, foot, and mouth disease: Coxsackie A16
- Collarette of scales: Pityriasis rosea (also shows Heral patch and Christmas tree appearance)

VIRAL INFECTIONS- ERRORS

00:59:07

- M/c cause of EM: Infections (viral- HSV) > Drugs
- Slap cheek appearance: Parvovirus B19 (also causes aplastic crisis)
- Cause of Kaposi sarcoma: HHV-8
- Hutchinson's sign: Herpes zoster ophthalmicus
- Acantholytic cells: Pemphigus and Herpes (multinucleated giant cells)
- Koilocytes: HPV infection

3 BACTERIAL SKIN INFECTIONS

Bacterial skin infections are divided into:
- Pyoderma
- Corynebacterium infections
- Pseudomonas infections
- Few other important bacterial infections

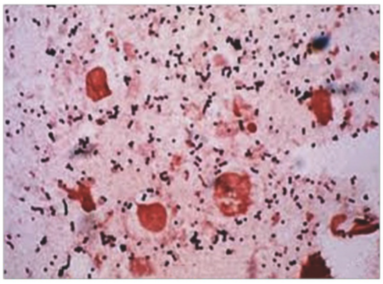
PYODERMA

00:00:30

Impetigo

FMGE 2018

- Most common pyoderma
- Superficial bacterial infection
- Predominantly affects children
- Etiology
  - Staphylococcus
  - Streptococcus
    → Group A beta hemolytic Streptococcus-
- Microscopy: Gram positive bacteria in clusters(grape like)

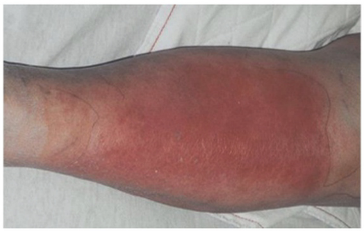


Types

Feature	Bullous Impetigo	Non-bullous Impetigo (Impetigo contagiosum)
Lesion type	Bullae (intact blisters)	Bullae rupture → crusted erosions
Characteristic crust	Golden crusting	Honey-colored crust
Age group	Newborns	Toddlers / school-going children
Causative organism	Staphylococcus aureus	Streptococcus » Staphylococcus
Target protein	Desmoglein 1 → Superficial blisters	
Complication	-	Can lead to Post-streptococcal glomerulonephritis (PSGN)
Treatment	Topical antibiotics	
		

Erysipelas vs Cellulitis

00:04:54
FMGE 2019

Feature	Erysipelas	Cellulitis
Common features	Pain, redness, swelling, fever, malaise	
Tissue involved	Superficial lymphatics Superficial dermis	Deep subcutaneous tissue
Margins	Well demarcated lesion	Not well demarcated
Causative organism	Group A β-hemolytic Streptococcus	Staphylococcus + Streptococcus
Treatment	Oral antibiotics	
	 Gp A, B-hemolytic strep	 Staph/Strep

Acute Lymphangitis

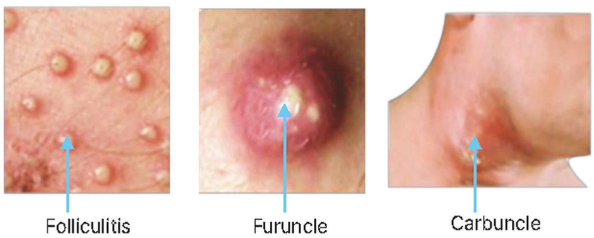
00:07:10

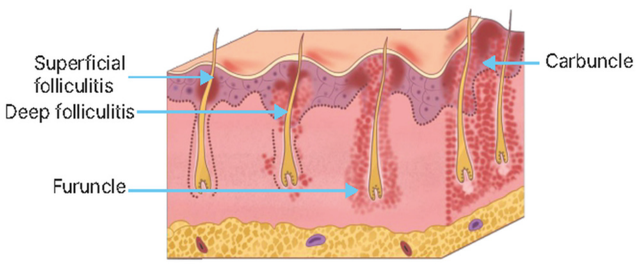
- Streptococcal infection of lymphatics vessels of the subcutaneous tissue
- Present as
    - Erythematous linear streaks of varying width.
    - Extends from the local lesion (i.e. the portal of entry of organism) towards the regional lymph nodes
    - Tender and enlarged

Follicular Infections

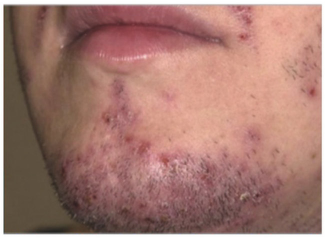
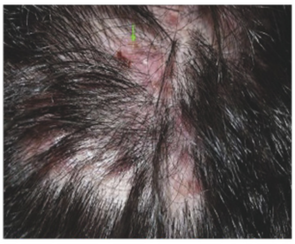
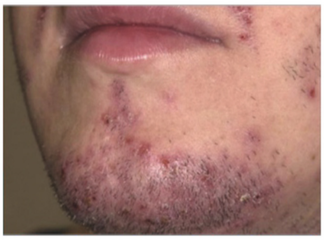
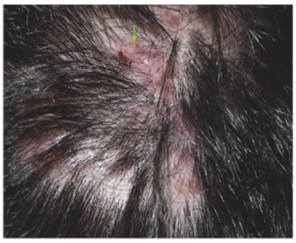
00:08:25

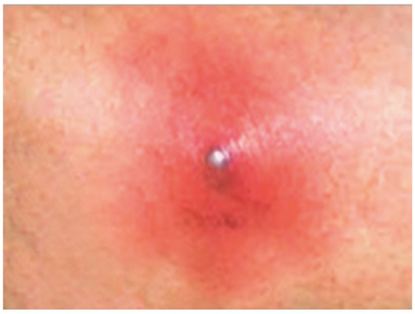
- Classified based on depth of follicle involvement:
    - Superficial Folliculitis
    - Deep Folliculitis
- Classified based on surrounding tissue involvement:
    - Furuncle
    - Carbuncle





Yourwish

Superficial folliculitus	Deep folliculitis
  • Aka Bockhart's folliculitis • Small superficial pustules • Mildly tender • Seen on face, hairline, limbs • Treated with topical antibiotics  	• Infection deeper in follicle • Beard area → Sycosis barbae(misnomer sycosis is fungal infection) • Scalp may be involved INICET 2023  

Furuncle	Carbuncle
• Folliculitis+ perifolliculitis • Single erythematous painful nodule	• Multiple contiguous hair follicles involved • Common in diabetics • Seen on trunk
	

TOXIN MEDIATED DISORDERS

00:11:50

Staphylococcal Scalded Skin Syndrome (Ssss)

- Caused by Staphylococcus
- Prior focus of infection elsewhere (ear, folliculitis etc.)
- Toxin: Exfoliative toxin (ET-1)
- Target:Desmoglein 1
- Causes intradermal split at granular layer
- Seen in:
  - Infants
  - Sick child
  - ICU settings

- Features:
  - Fever
  - Skin peeling
  - True Nikolsky positive
- Treatment : Oral / IV antibiotics

Staphylococcus aureus causes:	Streptococcus causes:

• Bullous impetigo
• Follicular infections
  ○ Superficial folliculitis
  ○ Deep folliculitis (sycosis barbae and sycosis nuchae)
  ○ Furuncles and carbuncles
• Ecthyma (strep > staph)
• SSSS, TSS
• Cellulitis (staph >strep)
	• Non-bullous impetigo
	• Ecthyma infectiosum
	• Erysipelas
	• Acute lymphangitis
	• Necrotizing fasciitis
	• Toxic shock syndrome
	• Scarlet fever

ECTHYMA

- Ecthyma contagiosum → Viral (Orf virus)
- Ecthyma infectiosum → Streptococcus
- Ecthyma gangrenosum → Pseudomonas

Ecthyma Infectiosum

- Etiology- Streptococcus
- Localised
- Erythematous plaque with central crusting

CORYNEBACTERIUM INFECTIONS

00:16:25

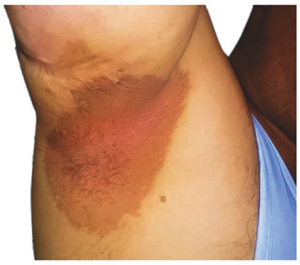
Causes:

- Erythrasma
- Pitted keratolysis
- Trichomycosis axillaris (misnomer)

Erythrasma

FMGE 2024

- Etiology : Corynebacterium minutissimum
- Common sites:
  - 4th toe interweb space (MC)
  - Axilla
  - Groin
  - Inframammary area
  - Interdigital spaces
- Presentation
  - Well demarcated patch,mildly scaly,non itchy
  - Erythematous
- Differentiatrd from tinea using woods lamp



- Diagnosis
  - Wood's lamp (made of Nickel oxide and Barium silicate) → Emits light of 365 nm wavelenght → Coral red fluorescence due to Coproporphyrin III
- Treatment : Topical antibiotics

Pitted Keratolysis

00:19:20

- Etiology: Micrococcus sedentarius
- Seen in:
  - Hyperhidrosis
  - Wet work
  - Swimmers
- Presentation:
  - Macerated feet
  - Multiple pits on sole

ANTHRAX

00:20:40

FMGE 2025

- Caused by: Bacillus anthracis
- Zoonotic infection : Seen in livestock handlers
- Presentation
  - Malignant pustule (misnomer)
    → Usually on finger tips
    → Erythematous oedematous plaque with central bulla/crusting/erosion

PSEUDOMONAS INFECTION

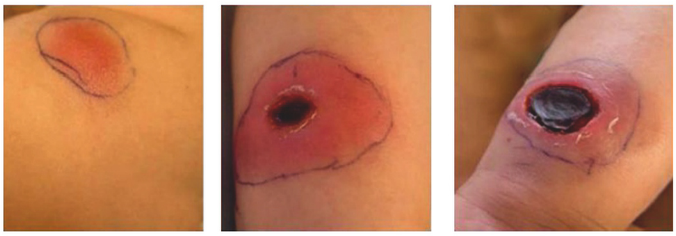
00:21:30

Hot Tub Folliculitis

- After swimming pool / jacuzzi
- Multiple erythematous monomorphic papules on trunk

Ecthyma Gangrenosum

- Caused by : Pseudomonas aeruginosa
- Seen in diabetics/immunocompromised/Sick Hospitalized patients
- Erythematous plaque→ Central necrotic crust → Eschar



Green Nail Syndrome

- Nail turns green

Treatment

Topical Antibiotics	Oral Antibiotics
• Fusidic acid • Mupirocin • Bacitracin	• Cloxacillin • Cephalosporins • Erythromycin • Amoxicillin

Q. Identify condition in the shown image:

A. Impetigo
B. Chickenpox
C. Herpes simplex
D. Molluscum contagiosum

Answer: **A.** Impetigo

FMGE 2019

Q. After a pharyngeal infection, an infant is exhibiting the following condition. What can be the diagnosis?

A. Staphylococcal Scalded Skin Syndrome
B. Epidermolysis Bullosa Simplex
C. Impetigo Contagiosa
D. Pemphigus foliaceus

Answer: **A.** Staphylococcal scalded skin syndrome

Q. Which of the following organisms is most likely to be the cause of the leg lesion shown in the image below, as presented by a young man? The lesions exhibit pain, well-defined raised edges, and the patient also reports blisters on his body. Furthermore, the patient is in good health with no co-existing medical conditions.

A. Group b streptococcus
B. Group a streptococcus
C. Staphylococcus aureus
D. Haemophilus influenza type b

Answer: **B.** Group A streptococcus

Last Minute Revision Points

- Coral red fluorescence → Erythrasma by Corynebacterium minutissimum due to coproporphyrin III
- Malignant pustule → Anthrax
- Hot tub folliculitis, Ecthyma gangrenosum → Pseudomonas aeruginosa

Important Differentiations

- Erysipelas vs cellulitis
  - Erysipelas → Well-demarcated, raised margins; caused by Group A β-hemolytic Streptococcus.
  - Cellulitis → Ill-defined margins; commonly Staphylococcus aureus.
- Types of erythema
  - Ecthyma gangrenosum → Pseudomonas aeruginosa; necrotic/gangrenous lesion.

- Ecthyma contagiosum (Orf) → Viral (Parapox virus).
- Ecthyma infectiousum → Streptococcus
- SSSS vs EBS
  - SSSS → Toxin-mediated, febrile child, infection focus present, Nikolsky positive.
  - Epidermolysis bullosa simplex → Genetic,not sick, friction blisters, no foci of infection,genodermatosis
- Tinea cruris vs erythrasma
  - Tinea cruris → Itchy fungal infection; no coral red fluorescence.
  - Erythrasma →Non itchy bacterial infection, well-demarcated, coral red fluorescence on Wood's lamp.

4 CUTANEOUS TUBERCULOSIS

CUTANEOUS TUBERCULOSIS

00.00.27

- Caused by Mycobacterium tuberculosis

Classification

00.00.41

- Based on → Mode of infection and Immune status of host

CUTANEOUS TUBERCULOSIS (TB)

- Exogenous
  - Non-immune host (Primary)
    - TB chancre
    - Post BCG
  - Immune host
    - Tuberculosis verrucosa cutis
- Tuberculides
  - True tuberculides
    - Lichen scrofulosorum
    - Papulonecrotic tuberculide
  - Facultative tuberculides
    - Erythema nodosum
    - Erythema induratum
- Endogenous
  - Non-immune host
    - Acute miliary TB
    - Tuberculous gumma
    - Orificial TB
  - Immune host
    - Scrofuloderma
    - Lupus vulgaris

TB Chancre

00.02.24

- Source → Exogenous
- Host → Non-Immune
- Aka Primary inoculation cutaneous TB
- Aka Analogous to Ghon focus
- Mostly seen on feet > hand
  - Presents as an ulcer with undermined edges

Important Information

- Differential diagnosis of an ulcer with undermined edges
  - TB Chancre
  - Chancroid
  - Pyoderma Gangrenosum

Tuberculosis Verrucosa Cutis

00.03.48

- Source → Exogenous
- Host → Immune
- Aka Post-primary Inoculation TB
- Seen in
  - Anatomist / Prosecutor wart
  - HCW
  - Farmer
  - Children - seen in the buttocks
- Presents as an asymptomatic verrucous(Hyperkeratotic surface) plaque on the exposed area

Lupus Vulgaris

00.05.14

NEET PG 2024

- M/c form of cutaneous TB in adults in India
- Aka plaque-type TB
- Site
  - Head & Neck
  - Arms
  - Legs
  - Buttocks
- Increased chance of SCC and BCC
- Source → Endogenous
- Host → Immune
- Transmission
  - Hematogenous
  - Lymphatic
- Presents with an asymptomatic erythematous, granulomatous, annular plaque with central scarring and peripheral extension
- Diascopy
  - Erythema → blanch → yellowish hue appears as an apple jelly nodule

Scrofuloderma

00.08.05

- M/C form of cutaneous TB in children
- Source → Endogenous
- Contiguous focus → erode the skin
- Source
  - Lymph node → Cervical > Axillary > Pre and Post auricular
  - Bone
  - Lacrimal gland
- Clinical Presentation:
  - Lesion overlying an inflamed lymph node.
  - Presents as erosions, nodules, discharging sinuses, or an ulcerated plaque.
- Asymptomatics

Tuberculids

00.10.06

- Hypersensitivity reaction to Mycobacterium tuberculosis → manifests in the skin

- Type IV hypersensitivity reaction
- The host has good immunity
- Criteria
  - Primary focus elsewhere
  - Positive mantoux
  - Tuberculoid histology
  - Culture negative
  - Response to ATT
- 2 Types
  - True Tuberculides
    - → Lichen scrofulosorum
    - → Papulonecrotic tuberculide
  - Facultative tuberculides
    - → Erythema induratum

Tuberculide	Features

Lichen scrofulosorum

	• Seen in children
	• Seen over the trunk
	• Presentation:
	  ○ Grouped, micropapular, perifollicular lesions.
	  ○ Lichenoid appearance.
	  ○ Asymptomatic.
	  ○ No scarring.
	• HPE: Superficial dermal granulomas

Papulonecrotic tuberculide 	• Seen in adults • Presents as necrotic papules • Mainly seen over the extremities • Lesions heals with scarring

Erythema induratum of Bazin

	• Seen over the posterior calves in middle-aged females
	• Presents as painful nodules with central necrosis or crusting
	• Heals with scarring
	• HPE: Vasculitis + panniculitis
	• Differential diagnosis → Erythema nodosum
	  ○ Causes
	    → TB
	    → Drugs
	    → Sarcoidosis
	    → Crohn's disease
	  ○ Seen over the anterior aspect of the leg
	  ○ No necrosis and no scarring
	  ○ HPE: Panniculitis

Yourwish

Diagnosis

- HPE → Skin biopsy
- PCR
- Culture
- Underlying TB focus can be found through
  - Mantoux test
  - Chest X-ray
  - IGRA

Treatment

- Regimen: 2 HRZE + 4 HRE.
- Duration: 6 months total (4 months intensive, 2 months continuation)

Atypical mycobacterium infection

00.17.18

Buruli ulcer

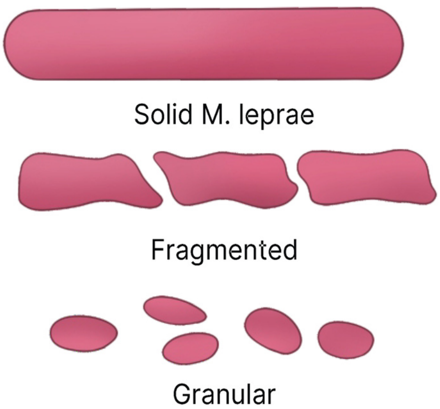
INICET 2021

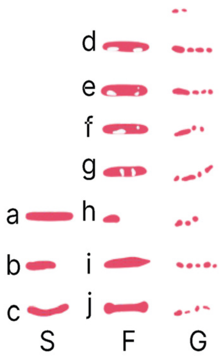
- Caused by Mycobacterium ulcerans
- Endemic to swampy/flooded areas
- Treatment
  - Rifampicin + Streptomycin

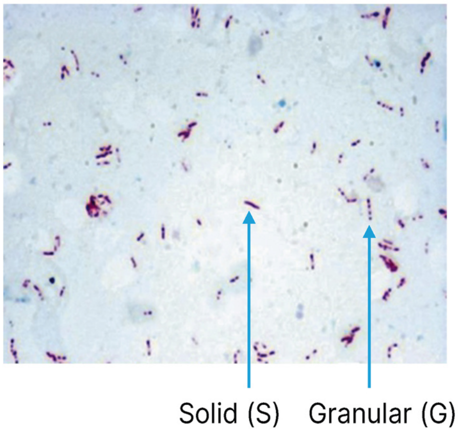
LEPROSY

00.18.04

- Caused by Mycobacterium Leprae
- Cardinal lesion
  - Loss of sensation in a typical skin lesion or in an area supplied by one of the peripheral nerves
  - Enlargement/tenderness in a peripheral nerve
  - Acid-fast bacilli in a slit skin smear
    - → Nick made 5mm long and 3mm wide
    - → Tissue is extracted because leprae bacilli lie deep inside
    - → ZN staining







Solid bacilli	Live bacilli
Fragmented	Dead bacilli
Granular	Dead bacilli

- Bacteriological index
  - Density/HPF
  - Both living and dead
  - Does not monitor treatment/resistance

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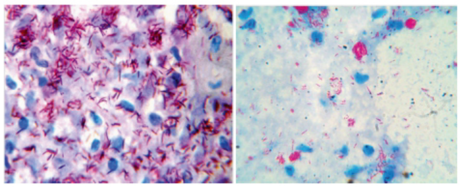

1-10 bacilli in 100 fields	1+
1-10 bacilli in 10 fields	2+
1-10 bacilli per field	3+
10-100 bacilli per field	4+
100-1000 bacilli per field	5+
>1000 bacilli per field , Presence of globi	6+

- Morphological index
  - Percentage of solid-stained bacilli, calculated after examining 200 bacilli lying singly
  - Monitors treatment response and resistance (Research mostly)

- Lepromin test
  - Nature: Delayed Type Hypersensitivity (Type IV) reaction.
  - Use: Not for diagnosis. Assessing host immunity (CMI).
  - Result: Positive in Tuberculoid pole (Good CMI).
  - Phases:
    - → Early: Fernandez reaction
    - → Late: Mitsuda reaction

INICET 2022

Spectrum Of Leprosy

00.24.04

- It is determined by patient's immune response
- **Two Poles:**
  - **Tuberculoid (Upper Spectrum):**
    - → Generates **Th1 response** (CMI) → Protective.
    - → Bacilli count: Low (AFB usually negative).
    - → Skin lesions: Few
  - **Lepromatous (Lower Spectrum):**
    - → Generates **Th2 response** (Antibodies) → Not protective.
    - → Bacilli count: High.
    - → Skin lesions: Numerous.

Pathogenesis of Nerve Damage

- Lepromatous Pole:
  - High bacilli load infiltrates nerves directly.
  - Result → Symmetrical nerve involvement.
- Tuberculoid Pole:
  - Bacilli settle in nerve
  - Good CMI targets the bacilli.

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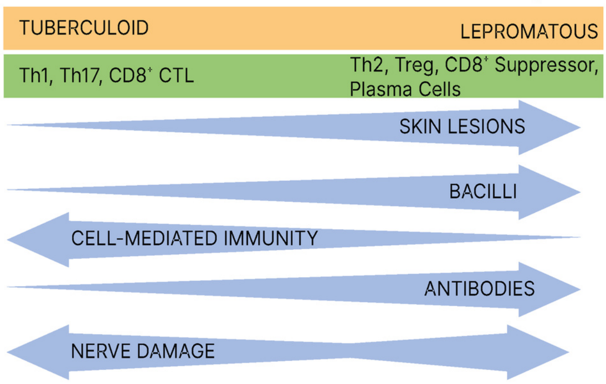
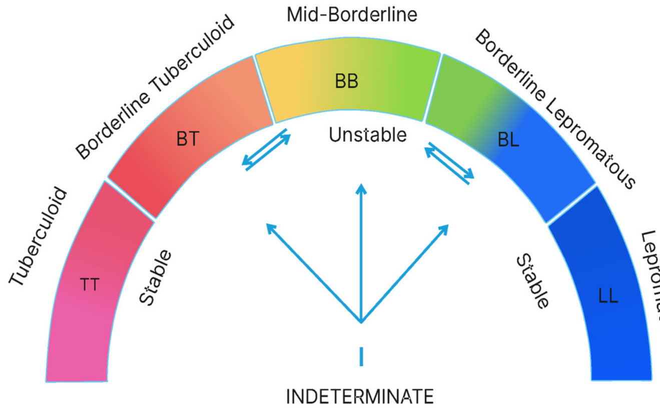


- Immune response damages the surrounding nerve (Bystander effect).
- Result → Localized nerve damage (near the patch)

Ridley Jopling Classification

- Based on clinical, histopathological, bacteriological, and immunological features.
- Spectrum:
  - TT: Tuberculoid (Good CMI).
  - BT: Borderline Tuberculoid.
  - BB: Borderline Borderline.
  - BL: Borderline Lepromatous.
  - LL: Lepromatous (Poor CMI).
- Did not include Indeterminate or Pure Neuritic Hansen (endemic to India).



THE SPECTRUM OF LEPROSY (Ridley-Jopling Classification)

Who Classification

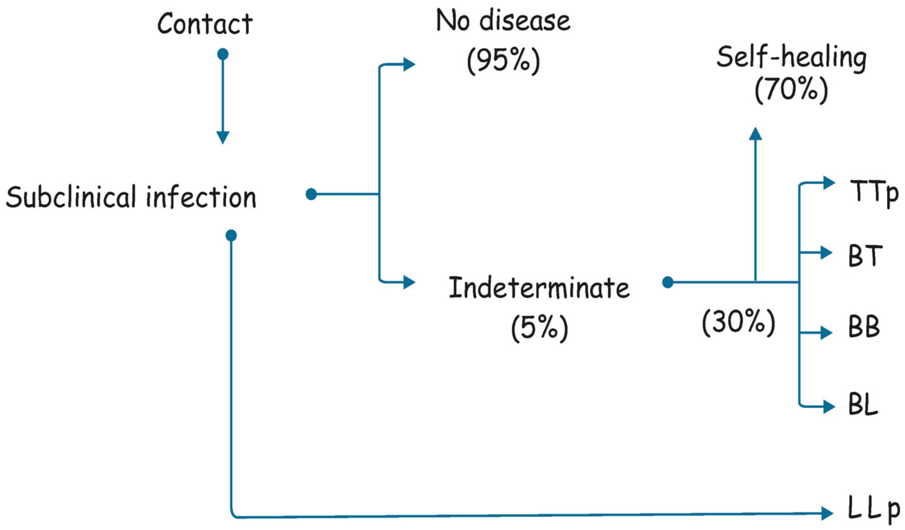
INICET 2022

	Multibacillary	Paucibacillary
Skin lesion	>5	1-5
Nerve involvement	>1	0
AFB	+	-

- NLEP classified leprosy similarly to WHO, but if 1 nerve is involved, then it is PB

Natural Course Of Leprosy

00.31.46



- Mode of transmission → Nasal discharge
- Subclinical infection
  - 95% → No disease
  - 5% → Indeterminate
    - → 70% → heals
    - → 30% → Determinate hansen

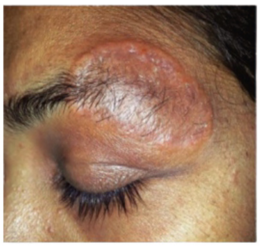
Yourwish

Indeterminate Leprosy

INICET 2021

- M/C form in India
- Endemic in Rajasthan, UP, Bihar
- Usually single hypopigmented lesion is seen on the face
- 70% heals
- No infiltration/ loss of sensation
- No AFB
- HPE → Perineural / Periappendageal infiltrate
- Differential Diagnosis: Pityriasis Alba.
  - Pityriasis Alba: Multiple lesions, fine scaling, spongiosis on histology.
  - Indeterminate: Single lesion, no scaling, infiltrate on histology

Tuberculoid Leprosy



- Immunity: High CMI (Th1).
- Bacilli: Very few (AFB negative).
- Clinical Features:
  - Few lesions (1-10).
  - Well-demarcated, erythematous to hypopigmented plaques.
  - 100% Loss of sensation (Anesthetic).
  - Loss of hair and glands.
  - The patch looks dry and deformed.
- Appearance: "Saucer right way up" appearance.

Boderline Tuberculoid

- M/C determinate hansen
- Skin lesions
  - 10-20 lesions
  - Hypopigmented
  - Well-demarcated, ill-defined borders at place
- No complete loss of sensation
- Characteristic features
  - Pseudopodia
  - Satellite lesion

Boderline Lepromatous

- Skin lesions
  - Numerous and ill-defined lesions
  - Tend to be symmetrical
  - Glove and stocking anaesthesia
- **Appearance**:
  - Inverted Saucer: Annular lesions with sloping outer edges (bacilli spreading outwards).
  - Punched Out / Swiss Cheese: Also seen here (though more classic for BB)

Boderline Leprosy

- Most Unstable form
- Rarest
- **Lesions:**
  - Geographic / Map-like /Bizarre configurations
  - Punched Out / Swiss Cheese Appearance: Characteristic inner sharp edge and outer sloping edge.

Lepromatous Leprosy

NEET PG 2021, 2024

- Infiltrated skin
- Numerous small symmetrical papules and nodules
- Glove and stocking anaesthesia
- AFB +
- Leonine facies

Important Information

- Leonine facies is also seen in conditions like
  - Acromegaly
  - Myxoedema
  - Chronic actinic dermatitis

	Tuberculoid	Lepromatous
No.of lesions	Less	More
Size	Larger	Smaller
Symmetry	Asymmetrical	Symmetrical
Anaesthesia	Lesional anaesthesia	Glove and stocking anaesthesia
AFB	Negative	Positive
HPE	Epitheloid cell granuloma	Foreign body / giant cell granuloma

Important Information

Sanctuary area / Safe site

- Areas not affected by lepra bacilli
- Warm areas → axilla, groin, scalp
- CNS
- Posterior chamber of the eye
- Lower respiratory tract
- Female reproductive tract

Other forms of leprosy

00:46:41

Histoid leprosy

- Unusual type of Lepromatous leprosy
- Focal loss of immunity

- Cause: Dapsone monotherapy in the past (Resistance).
- Presentation:
  - Firm, succulent, dome-shaped papules/nodules
  - Appears on clinically normal skin
  - Bacilli: High load, slender and elongated ("Habit of Histoid")

Pure Neuritic Hansen

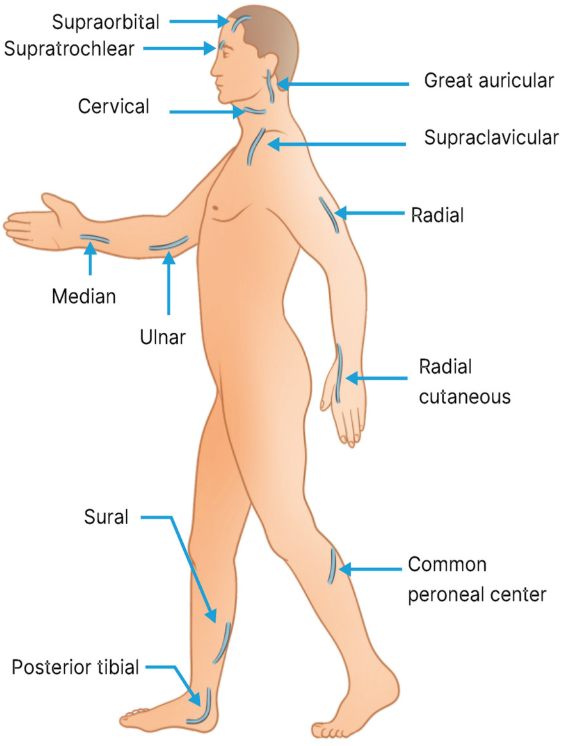
AIIMS 2018

- Endemic to India
- No skin lesions are seen
- Affects the nerve → area around it there was loss of sensation
- Diagnosis: Requires Nerve Biopsy
- Nerve Selection: Pure sensory nerves to avoid motor deficit
  - Sural Nerve (Leg)
  - Radial Cutaneous Nerve (Forearm)

Nerve Involvement In Leprosy

INICET 2022

- M/C sensory nerve affected
- Sensation affected: Loss of temperature > Fine touch > Pain
- Sensation not affected: Deep touch, vibration, proprioception



Surface marking of nerves commonly affected in leprosy

- Greater auricular nerve→ Better seen than felt
- M/C cranial nerve affected → Facial and Trigeminal nerve
- M/C peripheral nerve affected → Ulnar nerve
- Type of palsy
  - Ulnar nerve → high ulnar palsy
  - Median nerve → low median

Treatment
00.51.15

- MDT - Multi-Drug Therapy → to avoid chances of resistance

Adult

	PAUCIBACILLARY	MULTIBACILLARY
Rifampicin	• 600mg once monthly under supervision	• 600mg once monthly under supervision
Dapsone	• 100mg daily	• 100mg daily
Clofazamine	• 300mg once monthly under supervision • 50mg daily	• 300mg once monthly under supervision • 50mg daily
Duration	• 6 months	• 12 months

Children (10-14years)

	PAUCIBACILLARY	MULTIBACILLARY
Rifampicin	• 450mg once monthly under supervision	• 450mg once monthly under supervision
Dapsone	• 50mg daily	• 50mg daily
Clofazamine	• 150mg once monthly under supervision • 50mg on alternate days	• 150mg once monthly under supervision • 50mg on alternate days
Duration	• 6 months	• 12 months

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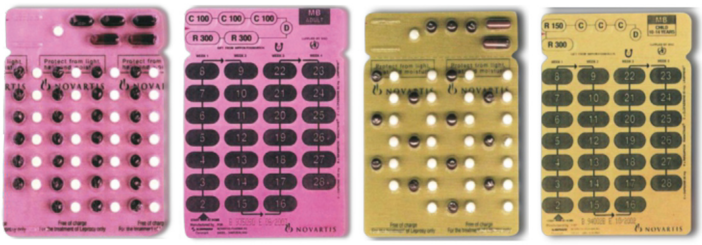


Aadult Child

- Clofazamine
  - Mechanism of action: not very well known
    - → Acts on the outer membrane, interacts with the respiratory chain and membrane phospholipids, causing cell death
    - → Also used in type II lepra reactions
      - Dose = 100mg TDS
    - → Side effects
      - Reddish discoloration of skin
      - Ichthyosis

- Pregnancy → MDT to be continued the same
- Concomitant TB → MDT without rifampicin + ATT

Type 1 Lepra Reaction
00.56.34

- Seen in a patient with upper spectrum (Tuberculoid pole)

Tuberculoid pole

↓

Start MDT
↓
Kills bacilli
↓
Release antigen
↓
Type IV hypersensitivity reaction

- Usually starts after starting treatment 2weeks - 6months

NEET PG 2025

- Existing lesions affected
  - Lesions become erythematous, edematous, painful and more prominent
- Nerve involvement
  - Tenderness, Abscess
- Management
  - Continue MDT
  - Mild → NSAID, Aspirin
  - TOC → steroids + MDT
  - Neuritis → steroids
  - Abscess → steroids, drainage
  - Other drugs
    → Azathioprime
    → Cyclosporine
    → Methotrexate

Type II lepra reactions

0.59.14

- Seen in patients with lower pole (Lepromatous leprosy)

Lepromatous pole
↓
Trigger (Pregnancy, Infection or Immunocompromised)
↓
Decreased immunity
(increased antibodies → TH2 cells)
↓
Type III Hypersensitivity reaction
↓
New crops of tender, evanescent papule, nodules

- Associated symptoms
  - Evening rise of temperature
  - Fever, malaise
  - Symptomatic symptoms
- Management
  - Mild → NSAIDS
  - Moderate to severe → steroids + MDT
  - Other drugs
    → Thalidomide

- 2nd drug of choice
- Given only when the patient on steroids develops side effects, is unresponsive, and not tolerant
- Tetratogenic drug

→ Clofazamine

TYPE 1 vs TYPE 2 Reaction

FMGE 2025

Feature	Type 1 Reaction	Type 2 Reaction
Type of HS Reaction	Type IV	Type III
Spectrum	Upper	Lower
Onset	After Starting MDT	Any triggers
Morphology	Existing lesions affected	New crops
Nerve involvement	Abscess, tenderness	Increased anaesthesia
Constitutional symptoms	—	Present (+)
Other organ involvement	—	Present (+)
Treatment	MDT + Steroids	MDT + Steroids

PYQ

01.03.08

Q. A 38 year old patient presents with hypopigmented nodular skin lesions and loss of sensation over the arm . On examination there is thickening of the ulnar nerve . A skin biopsy reveals epithelioid cell granuloma and an intradermal lepromin (antigen) is performed which is positive. Which of the following statements most accurately describes this condition? NEETPG 2024

A. Tuberculoid leprosy with a positive antigen test
B. Lepromatous leprosy with a positive antigen test
C. Erythema nodosum leprosum with a negative antigen test
D. Lepromatous leprosy with a negative antigen test

Ans: A

Q. 45 year old patient presents with a facial appearance that is marked by thick and coarse and deeply furrowed skin . The skin appears to be involved in the cheeks, forehead and nose. The patient complains of numbness and weakness in the extremities. On examinations that are hypopigmented and erythematous patches with loss of sensation, what is the medical condition characterized by the term Leonine facies ?

FMGE July 2025

A. Lepromatous leprosy
B. Acromegaly
C. Myasthenia gravis
D. Bell's palsy

Ans: A

Q.Which of the following will be the outcome of Leprosy , If left and treated ? **INICET July 2024**

A. No spontaneous remission is seen

B. Half of the cases resolves spontaneously after bacilli exposure

C. Spontaneous remission is more common in children than in adult

D. Indeterminate leprosy have more remission than tuberculoid

Ans: D

Q.What is the preferred treatment for a pregnant woman who is 12 weeks pregnant and undergoing Multi drug therapy for leprosy but is now experiencing type 2 Lepra reaction? **INICET May 2022**

A.Stop MDT and start oral steroid

B.Antibiotics

C.Thalidomide

D.Continue MDT and add oral steroid

Ans: D

Q.A 30 year old patient presents to the clinic Hypopigmented patches on the skin. On examination there are few well demarcated Slightly raised lesions with a Loss of sensation . Skin smears reveal no acid fast bacilli . Which of the following is the most likely diagnosis ? **INICET May 2022**

A. Multibacillary leprosy

B. Psoriasis

C. Tenia versicolor

D. Paucibacillary leprosy

Ans: D

Q.A recent study has identified a new species as a causative agent of leprosy.This species is referred to as?

A.Mycobacterium tropicum

B.Mycobacterium hansenii

C.Mycobacterium lepromatosis

D.Mycobacterium leprosyensis

Ans: C

Q.What is the incorrect dosage of Leprosy medications in adult ?

A.300mg Clofazamine once a month

B.50mg Clofazamine daily

C.450mg Rifampicin once a month

D.100mg Dapsone

Ans: C

Q.For the diagnosis of neurotic leprosy , which nerve is typically subjected to biopsy?

A. Median nerve

B.Superficial branch of radial nerve
C. Ulnar nerve
D. Lateral popliteal nerve

Ans: B

Q.Patient presented with around 10 to 20 B/L Asymmetrical erythematous infiltrated plaques as shown in the image . lesions are of varied size and bizarre shapes with irregular borders and Geographic appearance . Diagnosis ?

A. TT
B. BT
C. BB
D. LL

Ans: C

Q.Tuberculids are a type of cutaneous TB. Which of the following statement is incorrect for the same?
A.Low CMI so mantoux is negative
B. No AFB on culture from skin biopsy sample
C. Focus of TB infection is elsewhere
D. Responds positively to ATT

Ans: A

Q.A 25 year old male presents to the clinic with the complaint of a skin lesion over his left hand for the past many weeks. He has also experienced night sweats and fatigue for 3 months .He also had the symptoms before. On examination there is a single rough verrucous warty lesion with central scarring and serous discharge from the lesion.sensations are intact. a photograph of the lesion is given below

A.tuberculoid tuberculosis
B. primary tuberculosis
C. Post-primary tuberculosis with good resistance
D. Latent tuberculosis infection

Ans: C

Q.A patient presents with an erythematous annular plaque showing central scarring on face since few years.plaque is asymptomatic and not associated with any systemic symptoms. Which of the following is least useful in making a diagnosis
A. Skin biopsy and H&E
B. PCR
C. Culture
D. IGRA

Ans: D

LAST MINUTE REVISION POINTS

01:09:17

- Annular plaques with central scarring → Lupus vulgaris
- Scrofuloderma
  - Underlying contiguous foci
  - Lymph node mostly involved → Cervical
- Tuberculids criteria
  - Primary focus elsewhere
  - Positive mantoux
  - Tuberculoid histology
  - Culture negative
  - Response to ATT
- MB vs PB

	Multibacillary	Paucibacillary
Skin lesion	>5	1-5
Nerve involvement	>1	0
AFB	+	-

- Special features of various leprosy spectrum
  - TT → Saucer appearance
  - BT → Pseudopodia, Satellite lesion
  - BB → Punched out, swiss cheese, Geographic / map like bizarre configuration
  - BL → Inverted saucer
  - LL → Leonine facies
- Dosage of MDT
  - Rifampicin 600mg monthly once
  - Clofazamine 300mg monthly once
  - Clofazamine 50mg daily
  - Dapsone 100mg daily
- Type I Lepra reaction
  - Seen in a patient with upper spectrum
  - Occurs after starting MDT
  - Type IV hypersensitivity reaction
  - Existing lesions affected
- Type II Lepra reaction
  - Seen in a patient with lower spectrum
  - Occurs after a trigger like pregnancy, infection, immunocompromised
  - Type III hypersensitivity reaction
  - New lesions appears
- Treatment of reaction in leprosy
  - MDT + Oral Steroids
- Nerve Biopsied in pure neuritic lesions
  - Radial cutaneous nerve
  - Sural nerve

Yourwish

COMMON ERRORS

01:12:06

- Lepromin test
  - Obsolete
  - Not useful in diagnosis
  - Positive in tuberculid pole
- Ridley Jopling classification does not include
  - Pure neuritic Hansen
  - Indeterminate hansen
- Tuberculoid vs Lepromatous

	Tuberculoid	Lepromatous
No.of lesions	Less	More
Size	Larger	Smaller
Symmetry	Asymmetrical	Symmetrical
Anaesthesia	Lesional anaesthesia	Glove and stocking anaesthesia
AFB	Negative	Positive
HPE	Epitheloid granuloma	Foreign body / giant cell granuloma

- Spectrum of leprosy
  - TT
  - BT
  - BB
  - BL
  - LL
- Thalidomide
  - 2nd drug of choice in type II lepra reaction
- Dosage of MDT
  - Rifampicin 600mg monthly once
  - Clofazamine 300mg monthly once
  - Clofazamine 50mg daily
  - Dapsone 100mg daily
- Duration of MDT
  - MB → 12 months
  - PB → 6months

Yourwish

5 FUNGAL INFECTIONS OF SKIN

CLASSIFICATION OF FUNGAL INFECTIONS OF SKIN

00:00:23

- Fungal infections of the skin are broadly classified into:

1. **Superficial Mycoses**	• Involve only the stratum corneum
	• Examples:
	  o Pityriasis versicolor
	  o Piedra

2. **Cutaneous Mycoses**	• Limited to skin, hair, and nails
	• Do not involve subcutaneous tissue
	• Examples:
	  o Dermatophytosis (Tinea)
	  o Candidiasis

3. **Subcutaneous Mycoses**	• Involve deeper layers
	• Examples:
	  o Sporotrichosis
	  o Mycetoma
	  o Chromoblastomycosis

PITYRIASIS VERSICOLOR

00:01:36

- Also called Tinea versicolor → misnomer
  - Not caused by dermatophytes
- Causative organism: Malassezia
  - Important species: M. globosa, M. sympodialis, M. furfur
- Malassezia is a normal skin commensal
- Site: Seborrheic areas (oil-loving organism)
  - Upper trunk
  - Neck
  - Face
- Season: Rainy/humid season
- Age: Adolescents and adults (active sebaceous glands)
- High recurrence rate (recurs yearly)

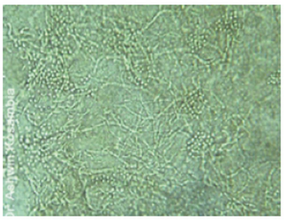
Clinical Presentation

- Asymptomatic, hypopigmented, or hyperpigmented macules
- Fine branny scaling: aka Nail scratch sign / Besnier's sign
- Lesions may coalesce into large patches
- Pathogenesis of Color Change
  - Hypopigmentation: D/t production of various carboxylic acids (Azelaic acid)
  - Hyperpigmentation: D/t production of Giant melanosomes

INICET 2023, 2022

Investigation

1. KOH mount
   - Shows yeast + hyphae
   - Spaghetti and meatball appearance
   - Also called Banana and grapes appearance
2. Wood's lamp
   - Yellowish fluorescence
   - Wavelength: 365 nm



Treatment

INICET 2023

- Counseling: recurrence, hypopigmentation
- Topical (First-line):
  - Azoles: Clotrimazole, Luliconazole, Sertaconazole
  - Selenium sulfide
  - Zinc pyrithione
  - Sulfur
- Oral (for severe/recurrent/immunocompromised): Fluconazole, Itraconazole

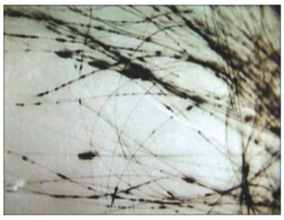
PIEDRA

00:08:36

Black Piedra

AIIMS 2018

- Black, hard, gritty nodules
- Firmly adherent to scalp hair
- Organism: Piedraia hortae



Black

White Piedra

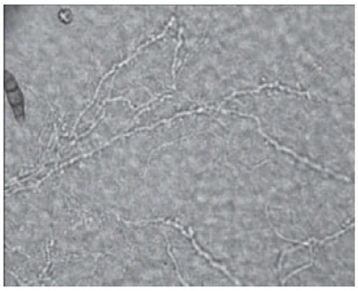
- White, soft nodules
- Affects axillary/pubic hair
- Organism: Trichosporon asahii / Trichomycosis nodosa

White

DERMATOPHYTOSIS (TINEA)

00:09:41

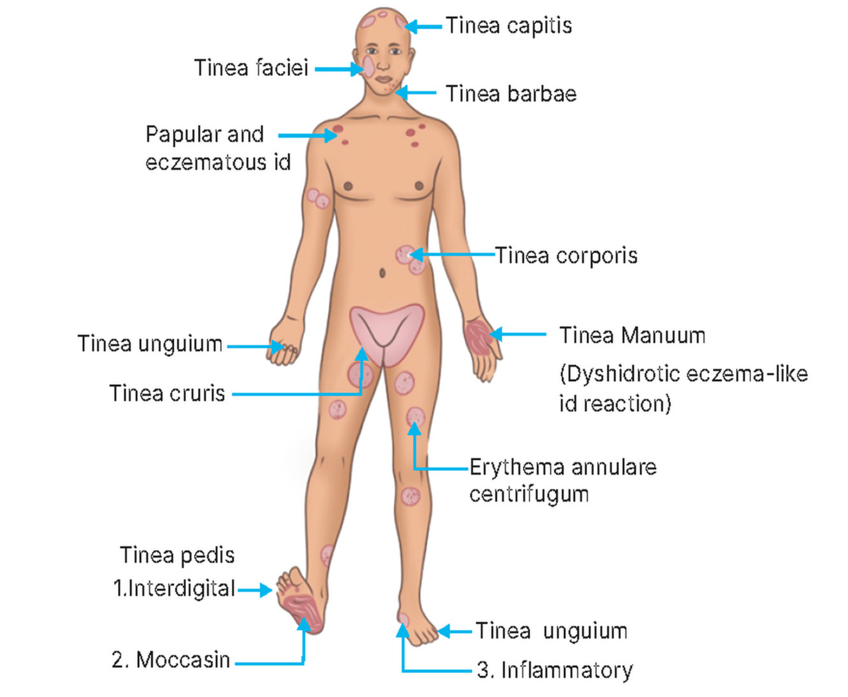
- There are 3 species
  1. Epidermophyton
  2. Microsporum
  3. Trichophyton
- Affect skin, hair, nails
- Do not affect the mucosa
- Transmitted by fomites
- KOH: branched septate hyphae



Species	Skin	Hair	Nails
Epidermophyton	+	-	+
Microsporum	+	+	-
Trichophyton	+	+	+

Classification of Tinea by Site

Site	Name
Scalp	Tinea capitis
Face	Tinea faciei
Beard	Tinea barbae
Body	Tinea corporis
Hands	Tinea manuum
Nails	Tinea unguium
Groin	Tinea cruris
Feet	Tinea pedis



Typical Tinea Lesion

INICET 2021, 2023

- Itchy
- Erythematous plaque
- Central clearing
- Peripheral scaling, crusting, vesicles

Tinea Capitis

Causative Species

- Most common: Trichophyton tonsurans > Microsporum canis
- Epidermophyton does NOT cause Tinea capitis

Hair Invasion Types

- Ectothrix: Fungus outside the hair shaft
- Endothrix: Fungus inside the hair shaft

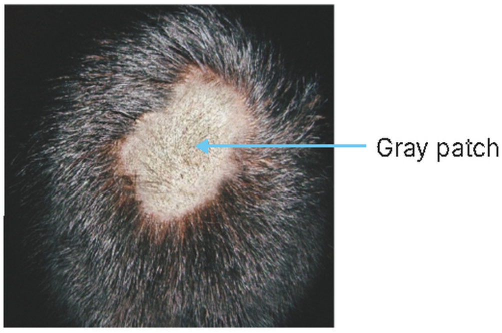
Clinical Types

NEET PG 2021, AIIMS 2019

Inflammatory	• Kerion • Favus
Non-Inflammatory	• Grey Patch • Black Dot

Non-Inflammatory

1. Gray Patch
   - Circular patch of alopecia + itching
   - Overlying Gray scales (fungal colonies)
   - Broken hairs present

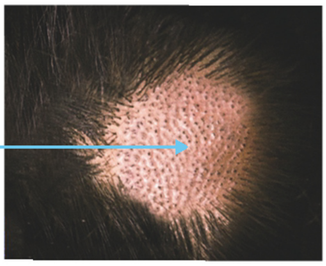


Yourwish

- Ectothrix infection → M. Canis
- Positive Wood's lamp → Bright green fluorescence
- Responsible for outbreaks in school

2. Black Dot
   - Angular alopecia → Black dots (swollen hair shaft)
   - Broken off hairs
   - Endothrix infection
   - Species → Trichophyton
     → Tonsurans
     → Violaceum
     → Sudanense
   - Wood's lamp → No Fluorescence

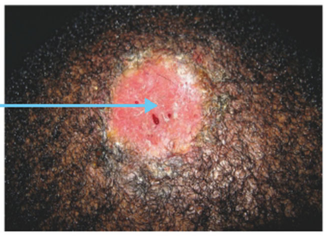
Black dot
Tinea capitis



Inflammatory

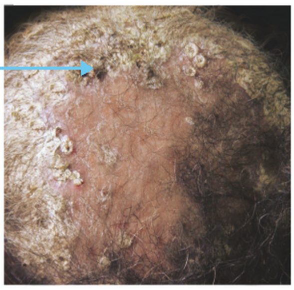
1. Kerion
   - Boggy, tender swelling
   - Studded with Pustules and broken hairs
   - A patch of alopecia is present
   - Fever and pain may be present
   - Constitutional symptoms and lymphadenopathy may occur
   - Caused by: Trichophyton ferrugineum, Trichophyton verrucosum
   - KOH / culture and Wood's lamp →Negative
   - Chances of scarring present

Kerion



2. Favus
   - Caused by: Trichophyton schoenleinii
   - Air spaces are present inside the hair shaft
   - Alopecia patch seen
   - Scutula: Cup-shaped crust (fungal colonies and epithelial debris)
   - Wood's lamp → Dull green fluorescence

Favus



Treatment of Tinea Capitis

- DOC: Oral Griseofulvin
- Topical agents ineffective
- Alternatives: Terbinafine, Itraconazole

Tinea Corporis

00:22:51

- Involves body skin
- Most common species → T. mentagrophytes
  - Annular lesions with central clearing
- Multiple concentric lesions → Tinea circinata / Tinea imbricata

Tinea Pedis

00:23:50

FMGE 2023

- Also called Athlete's foot
- Commonly affects the 4th web space

Tinea Cruris

AIIMS 2018

- Groin involvement
- Also called:
  - Dhobi itch
  - Jogger's itch
- Less scaling due to maceration

Tinea Incognito

00:25:23

FMGE 2023

- Modified tinea due to steroid / OTC cream use
- Initial improvement followed by recurrence
- Central clearing absent
- Diagnosis clue → history of steroid use

Tinea Unguium

AIIMS 2019

- Dermatophyte nail infection
- Type of onychomycosis caused by tinea
  - Onychomycosis: Fungal infection of the nail (can be caused by Candida, tinea, and other fungi)
- Asymptomatic
- Yellow discoloration
- Subungual hyperkeratosis
- Slow nail growth

Types

- Distal lateral subungual (DLSO) - most common

- Superficial white onychomycosis

- Proximal subungual onychomycosis (More common in HIV patients)

- Total dystrophic onychomycosis

Treatment of onychomycosis

Topical Treatment	Systemic Treatment

• Used when few nails are involved (usually <3 nails)
• Nail lacquers
  ○ Ciclopirox olamine → Daily application
  ○ Amorolfine → Weekly application
• Luliconazole lotion
	• Used when ≥3 nails are involved, matrix involvement, or dystrophic changes
	• Itraconazole
	  ○ Dose: 100 mg BD or 200 mg OD
	  ○ Duration:
	    → 2 months → Fingernails
	    → 3 months → Toenails
	  ○ Preferred in Candida infections and molds
	• Terbinafine
	  ○ Dose: 250 mg OD
	  ○ Duration:
	    → 6 weeks → Fingernails
	    → 12 weeks → Toenails
	  ○ More preferred in general

Pulse Therapy

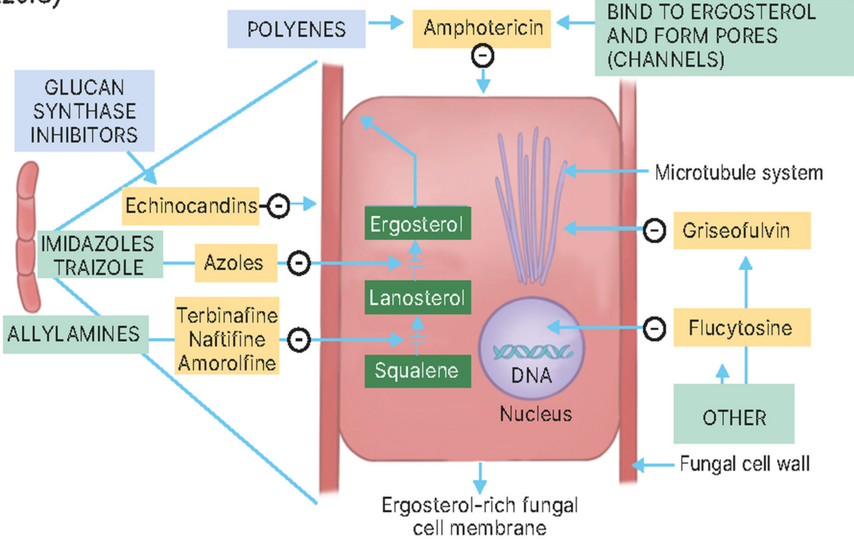
- Higher doses of antifungal drugs are given for a short duration
- Terbinafine: 250 mg BD, 1 week per month
- Itraconazole: 200 mg BD, 1 week per month
- Number of Pulses required
  - Fingernails → 2-3 pulses
  - Toenails → 4-5 pulses

Newer Drugs (Topicals)

- Efinaconazole: 10% solution; Triazole
- Tavaborole - Oxaborole; 5% lotion
- Luliconazole lotion

Treatment of Dermatophytosis

- Common agents:
  - Allylamines (Terbinafine)
  - Azoles (Itraconazole)



CANDIDIASIS

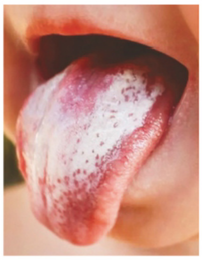
00:34:45

- Caused by Candida albicans
- Common in: Diabetics, Pregnant women, Immunocompromised
- Affects skin, mucosa, nails
- Does not affect hair
- KOH Finding → Budding yeast cells

Oral Candidiasis

- Generally present with Pain/irritation in the oral mucosa
- White or red plaques can be present

NEET PG 2019

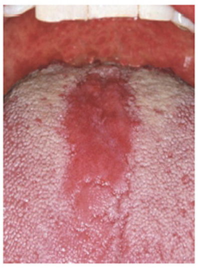


Acute Pseudomembranous (Oral Thrush)

- Most common oral candidiasis
- White plaques that can be scraped off

Candidal Leukoplakia/ Chronic Plaque

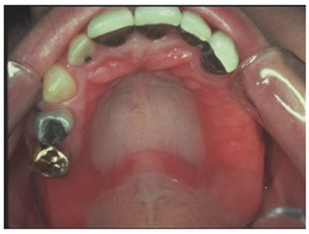
- White plaques
- Cannot be scraped
- Premalignant



Acute Erythematous candidiasis/antibiotic sore mouth

- Red painful lesions
- After antibiotics

Chronic Erythematous/denture stomatitis



Genital Candidiasis

- Candida can affect the genital mucosa
  - In males → affect glans penis
- Candidal Balano-posthitis: Satellite pustules → rupture → Frayed margins
- Seen in folds and genitalia

NEET PG 2025

Candidal Intertrigo

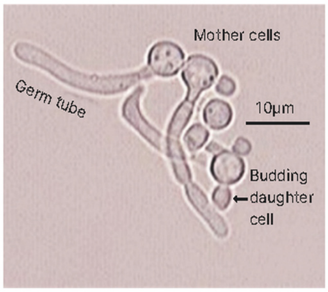
- **Intertrigo** = involvement of **skin folds**
- Candida commonly affects intertriginous areas
- Clinical Features
  - Erythematous plaques in skin folds
  - **Satellite pustules** present
  - **Frayed/peeling edges** seen

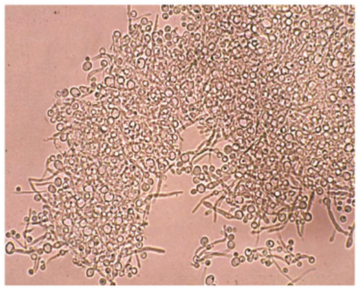
Differentiation from Tinea Cruris

- **Candidal intertrigo**:
  - Satellite lesions present
  - Frayed edges present
  - Often has a **concave surface**
- **Tinea cruris**:
  - No satellite lesions
  - No frayed peeling edges
  - Usually does not have a concave surface

Investigation of Candidiasis

- KOH smear: Shows budding yeast cells
- Germ tube test: Specific for Candida albicans
- Culture: White, cottony colonies seen





Treatment of Candidiasis

- Only azoles are used
- Allylamines are NOT used
    - Allylamines are only for dermatophytes

SUBCUTANEOUS MYCOSES

00:40:21

- Entry via the thorn prick
- Common in farmers/gardeners

NEET PG 2022, FMGE 2021

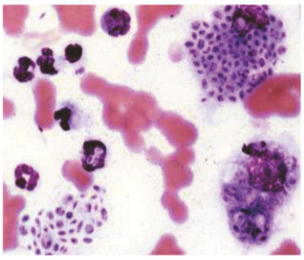
Sporotrichosis

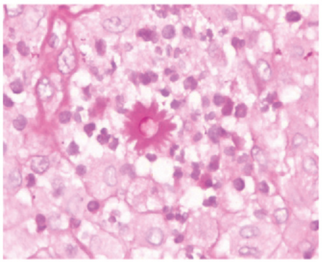
- Organism → Sporothrix schenckii
- Aka Rose gardener's disease

Clinical Features

- Linear distribution of lesions
- Lesions are: Papules & nodules with central crusting or erosion
- Distribution follows lymphatic channels
    - Called the sporotrichoid pattern
- Lesions are chronic, usually painless, and asymptomatic

Investigations





- Histopathology
- Asteroid bodies seen
- Splendore-Hoeppli phenomenon
- PAS stain → shows cigar-shaped bodies

Treatment

- Potassium iodide
- Terbinafine
- Itraconazole

Mycetoma

00:44:54

NEET PG 2022, 2024

- Aka: Madura Foot/Madura Mycosis
- Epidemiology: Seen in farmers, usually affecting the foot (Painless)
- Classification:
    - Actinomycetoma: Caused by bacteria
    - Eumycetoma (Eumycotic): Caused by fungus (M/c species: Madurella mycetomatis)
- Clinical Triad:
    - Tumefaction/Induration (Swelling of feet)
    - Discharging sinuses
    - Grains in discharge (colonies of fungus or bacteria)
- Complications:
    - Leads to deformities (especially Eumycetoma due to slow progression and lack of pain)

Actinomycetoma vs. Eumycetoma

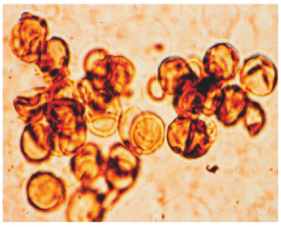
Feature	Eumycotic Mycetoma	Actinomycotic Mycetoma
Causative organism	True fungi	Actinomycetes (bacteria)
Rate of invasion	Slowly invasive	Rapidly invasive
Presentation	Late presentation (relatively asymptomatic initially)	Early presentation
Pus formation	No pus	Pus present
Color of granules	Black/brown granules	Yellowish-white granules
Degree of deformity	More deformity	Less deformity
Size of granules	4-5 microns, in clusters	< 1 micron, lie singly
Gram stain	Gram-negative	Gram-positive
Special stains	GMS positive, PAS positive	GMS positive
Treatment response	Responds to antifungals (Itraconazole, Amphotericin B) + Surgical intervention (due to deformities)	Responds to antibiotics (Sulphonamides, Doxycyclines) Dapsone + Strepto, Cotrimoxazole + Strepto 2^{nd} line → Rifampicin

Chromoblastomycosis

00:50:51

INICET 2024

- Pigmented fungi
- Causative Organism: Phialophora verrucosa (Pigmented fungi)
- Clinical Features:
  - Asymptomatic verrucous / cauliflower-like lesion
- Microscopy (PAS Stain):
  - Fungus divides in all planes by binary fission
  - Appearance: Copper Penny bodies (also called Sclerotic or Muriform bodies)



PYQs

00:52:37

Q1. A 35-year-old patient presents to the OPD with a history of prolonged use of topical steroids for a skin condition. The patient complains of an expanding rash that has become less red and itchy since using the steroids. On examination, there are well-defined, slightly raised, erythematous plaques with central clearing and a scaly border on various parts of the body. What is the most likely diagnosis for this patient's condition?

A. Tinea incognito
B. Tinea corporis
C. Tinea cruris
D. Tinea pedis

Ans. A

Q2. What type of tinea is the 10-year-old child experiencing, as indicated by the patchy hair loss observed in the provided image?

A. Ectothrix
B. Endothrix
C. Kerion
D. Favus

Ans. A

Q3. A 26-year-old man visits the clinic with a complaint of reddish skin lesions on his right leg for two weeks. He has no chronic medical conditions and takes no medications. He is a gardener by profession and recalls a thorn prick a few days back. Examination findings are shown in the image below

A. Mycetoma
B. Sarcoidosis
C. Sporotrichosis
D. Kaposi sarcoma

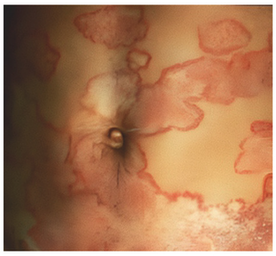
Ans. C

Q4. Which drug, known for developing widespread resistance, is commonly used in the treatment of Tinea cruris?

A. Itraconazole
B. Griseofulvin
C. Terbinafine
D. Voriconazole

Ans. C

Q5. Among the following, which will not present with dermatological manifestations as seen in the image given?



A. Trichophyton
B. Microsporum
C. Aspergillus
D. Epidermophyton

Ans. C

Q6. What is the appropriate next course of action for a child who exhibits itchy scalp lesions and hair loss, as depicted in the image provided?

A. KOH mount
B. Slit skin mount
C. Gram staining
D. Biopsy

Ans. A

Q7. What is the probable diagnosis for a cauliflower-shaped mass on the foot of a farmer that appeared after a minor injury, with microscopy revealing copper penny bodies?

A. Chromoblastomycosis

B. Blastomycosis

C. Sporotrichosis

C. Phaeohyphomycosis

Ans. **A**

Q8. A 28-year-old female complains that in the previous 3-4 years all her toenails have changed in colour. In addition, the rate of nail growth has slowed enormously. No other complaints are there. What treatment should be recommended for the most likely diagnosis?

A. Topical mild steroids

B. Topical terbinafine for 4 weeks

C. Oral terbinafine for 6 weeks

D. Oral terbinafine for 3 months

Ans. **D**

Q9. A patient from Tamil Nadu presents with a long-standing, painless, progressively enlarging swelling of the foot associated with multiple discharging sinuses, as shown in the image. The discharge contains black grains. Biopsy of the lesion shows hyphae. What is the most appropriate treatment?

A. Antibiotics alone without surgery

B. Antifungals with surgical debridement

C. Dapsone-based multidrug therapy

D. Only wide surgical excision

Ans. **B**

Q10. A 60-year-old female with a great toe infection. She had a significant discoloration with a subungual hyperkeratosis that caused surface changes. She was suspected of having onychomycosis. Which is the topical drug given for toenail onychomycosis?

A. Itraconazole

B. Tavaborole

C. Griseofulvin

D. Caspofungin

Ans. **B**

Q11. Which type of alopecia is commonly associated with inflammatory alopecia in a 30-year-old male patient who presents with tinea capitis infection?

A. Endothrix and Favus

B. Ectothrix and Endothrix

C. Favus and Kerion

D. Kerion and Endothrix

Ans. **C**

Yourwish

Q12. A patient presents with irregular swelling over the foot, multiple discharging sinuses, and black granules. A KOH mount is performed on the discharge. What is the most likely observation?

A. Arthrospores

B. Slender dematiaceous fungi

C. Yeast

D. Septate hyphae 4-5μm

Ans. D

LAST MINUTE REVISION POINTS

00:59:38

1. Pityriasis Versicolor

- Cause: Malassezia
- Clinical: Hypopigmented lesions on trunk, fine branny scales
- KOH: Spaghetti and Meatball appearance
- Wood's Lamp: Yellowish fluorescence

2. Dermatophytes Classification

- Epidermophyton: Does not affect hair
- Microsporum: Does not affect the nail
- Trichophyton: Affects all three (Skin, Hair, Nail)

3. Gray Patch:

- Type of Ectothrix
- Caused by Microsporum canis
- Woods lamp fluorescence+ Bright Green fluorescence

4. Black Dot:

- Endothrix
- Caused by Trichophyton tonsurans
- Negative fluorescence

5. Kerion:

- Boggy swelling a/w inflammation, systemic features, scarring alopecia
- T. verrucosum and ferrugineum

6. Favus:

- T. schoenleinii
- Cup-shaped crust (Scutula)
- Dull Green fluorescence

7. Terminology

- Athlete's Foot: Tinea Pedis
- Dhobi Itch / Jogger's Itch: Tinea Cruris
- Tinea Incognito: Hidden Tinea (after steroid/OTC use)

8. Tinea Unguium Treatment

- Terbinafine (250mg OD): Fingernails (6 weeks), Toenails (12 weeks/3 months).
- Itraconazole (100mg BD): Fingernails (2 months), Toenails (3 months). Pulse therapy is also used.
- New Lacquers: Tavibarol, Efinaconazole

9. Sporotrichosis

- Caused by Sporothrix schenckii
- Also called Rose gardener's disease
- Lesions spread in a lymphatic/linear distribution
- Microscopy/histology:
  - Cigar-shaped yeast
  - Asteroid bodies

10. Mycetoma

- Typically affects the foot of a farmer
- Features: Swelling, Multiple discharging sinuses

COMMON ERRORS

01:03:41

- Wood's Lamp Fluorescence in Tinea Capitis:
  - Positive: Gray Patch (Bright Green), Favus (Dull Green)
  - Negative: Endotrix, Kerion
- Tinea Incognito:
  - Always look for the history of OTC cream/steroid use or a relapsing condition
- Jogger's itch → Tinea cruris
- Dhobi's itch → Tinea cruris
- Athlete's foot → Tinea pedis
- M/c Species of Tinea Capitis: Trichophyton tonsurans > Microsporum canis
- Tinea Unguium - Treatment duration
  - Terbinafine
    - → Fingernails → 6 weeks
    - → Toenails → 12 weeks (3 months)
  - Itraconazole
    - → Fingernails → 2 months
    - → Toenails → 3 months
- Candidiasis vs. Leukoplakia (Oral):
  - Candidiasis (Oral Thrush): Symptomatic (pain/irritation), can be scraped off
  - Leukoplakia: Diagnosis of exclusion (e.g., smoker), asymptomatic, cannot be scraped off
- Eumycetoma vs. Actinomycetoma:
  - Eumycetoma: Slow progressive, deep invasion, high deformity. Black grains. Gram (-), PAS (+)
  - Actinomycetoma: Rapid progressive, less deformity. Yellow/Red granules. Gram (+), PAS (-)

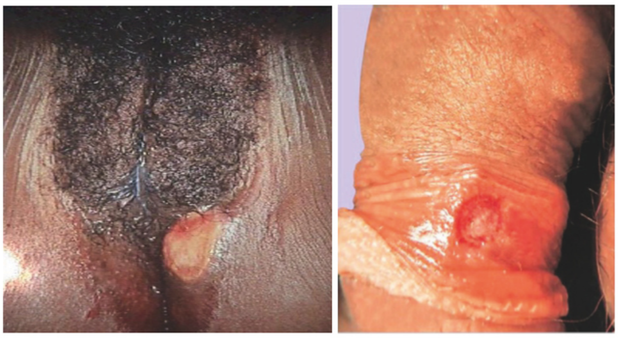
6 SEXUALLY TRANSMITTED INFECTIONS (STIs)

GENITAL ULCER DISEASE
00:00:21

Syphilis
00:00:37

- Caused by Treponema pallidum
- According to the natural course:
  - Primary syphilis
  - Secondary syphilis
  - Latent syphilis
  - Tertiary syphilis

NEET PG 2023, FMGE 2023, INICET 2023



Primary Syphilis

- Incubation period is roughly 10-90 days
  - Depends on the size of the inoculum
- Lesion - Chancre
  - Characteristics :
    - → Single
    - → Painless
    - → Indurated
    - → Regular, clearly defined edges
    - → Grey slough
  - This lesion is also called:
    - → Hunterian chancre
    - → Hard chancre
- On examination
  - Induration feels hard → Button sign
  - Lymph nodes characteristic
    - → Bilateral
    - → Discrete
    - → Rubbery
    - → Hard like lead shots → shotty
    - → Painless

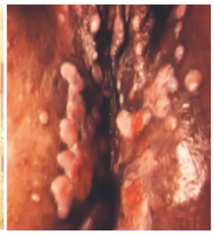
Secondary Syphilis

- When the patient is untreated, Treponema goes through the bloodstream → causing a secondary stage.
- AKA:
  - Great imitator, as it can imitate drug reactions
  - Syphillid
- Skin lesions
  - Bilaterally symmetrical
  - Asymptomatic

- Ham-colored
- Various morphologies:
  - → Macule
  - → Papule
  - → Annular
  - → Follicular
  - → Never vesicles or bullae



- Based on lesions, it can be called:
  - Papular syphilis
  - Macular syphilis
  - Maculopapular lesions on palms and soles → Brownish/coppery hue
    - → Buschke-Ollendorff sign: Press the lesions with the blunt end of a pen → patient winces with pain due to endarteritis

- High-risk population:
  - Truck driver
  - Migrant laborer
  - Multiple sexual partners
- Condyloma lata

Papular syphilids on folds of skin of the groin / perianal area

↓

Macerate due to friction

↓

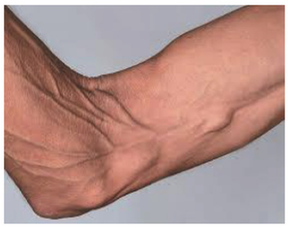
Broad-based flat moist lesions

(Highly infectious due to high concentration of organisms)

Important Information

- Condyloma acuminata → hyperkeratotic, dry, warts, verrucous
- Condyloma lata → moist


- Mucosal lesions:
  - Painless ulcers in oral cavity → Mucous patches
  - Coalescing of these painless ulcers → Snail track ulcers
- Hair lesions include: Moth-eaten alopecia
  - Not standalone → other features present
- Lymph nodes show:
- Generalized lymphadenopathy
- Epitrochlear lymphadenopathy



Latent Syphilis

- No clinical manifestations
- Only Serologicla evidence → VDRL or TPHA positive

Type	Duration
Early latent	< 1 year/ < 2 years
Late latent	> 1 year /> 2 years

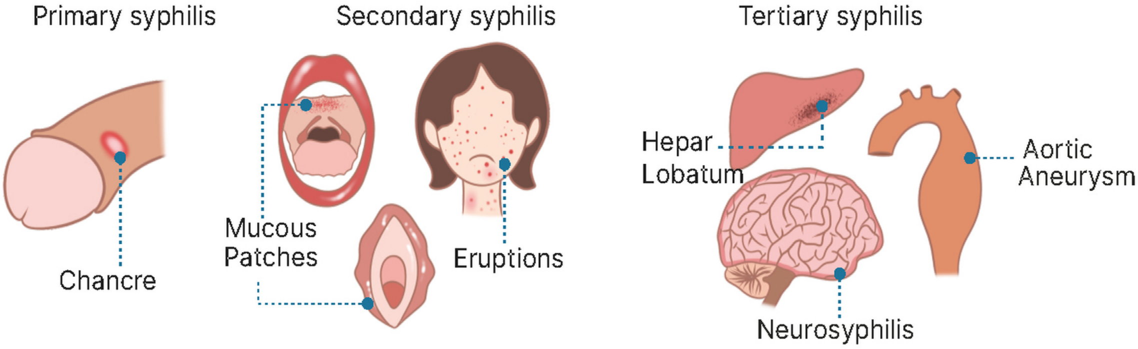
Relapsing Syphilis

- After latent the patient relapses back into secondary stage.
- Chancre redux / Monorecedive/ Relapsing chancre:
  - Relapsing lesion develops at the site of the old chancre

Yourwish

Tertiary Syphilis

- Usually presents 20-40 years after primary infection
- Manifestations of tertiary syphilis
  - Skin → Gummas
    → Well defined necrotic ulcers - granulomatous and gummatous consistency
  - Bone
  - Lymph node involvement
  - Cardiovascular syphilis → Aortic aneurysm
  - Neurosyphilis



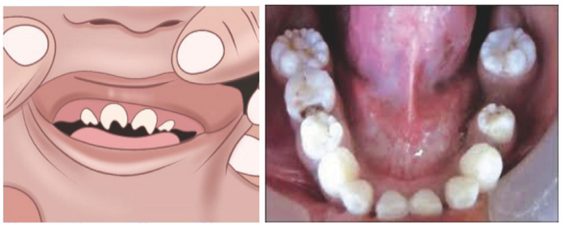
Congenital Syphilis

00:12:35

FMGE 2018

- Can occur when a mother with syphilis is conceived or delivers
- Divided into:
- Early congenital (< 1 year)
- Late congenital (> 1-2 years) → Presents with stigmata
- Early congenital syphilis:
  - Snuffles → Profuse mucoid nasal discharge in an infant
  - Syphilitic pemphigus → Presenting with Vesicles and bullae

- Late congenital syphilis:
  - Present after 1- 2 years
  - Hutchinson teeth
    → Cone / peg-shaped central incisors
  - Mulberry molars
    → Molar teeth appear like mulberries
- Hutchinson triad (ENT):
  - Hutchinson teeth
  - 8th nerve deafness
  - Interstitial keratitis



Investigations In Syphilis

- Dark-Ground microscopy
  - Slender, wavy, fluorescent organisms on a dark background
- Serological test

Feature	Treponemal Tests	Non-Treponemal/ Reagin Tests
Examples	TPHA, FTA-ABS, TPI, TPPA, EIA, Latex agglutination	VDRL, RPR, Wasserman, Trust, RST, UST
Specificity	More specific	Sensitive (less specific)
Time of Positivity	Positive early	Positive 4-6 weeks after infection
Titers	Not done in titers	Done in titers
After Treatment	Remain positive lifelong	Become negative
Use in Monitoring	Not useful for monitoring disease activity	Useful for monitoring disease activity

- Most specific test: Dark ground microscopy
- Most specific blood test: FTA-ABS, TPHA
- Earliest to become positive: IgM captia> FTA ABS
- Most sensitive test: IgM captia> FTA ABS
- Screening tests: VDRL, RPR
- Field-based screening is done using the RPR card

Stage	Investigation of Choice
Primary	Dark-field microscopy
Secondary	FTA-ABS
Tertiary	EIA
Neurosyphilis	CSF examination
Monitoring disease activity	VDRL titers

Treatment Of Syphilis

Condition	Drug	Dose / Regimen
Early syphilis(1°, 2°, early latent stage)	Inj. Benzathine penicillin	2.4 million units IM single dose (1.2 million in each buttock)
Children	Benzathine penicillin	50,000 units/kg upto adult dose
Late latent syphilis **Benign tertiary syphilis** **Cardiovascular syphilis**	Benzathine penicillin	2.4 million units IM 3 doses weekly interval
Neurosyphilis	Aqueous crystalline penicillin (IV) OR Procaine penicillin + Probenecid	To ensure BBB penetration
Congenital syphilis		

Chancroid

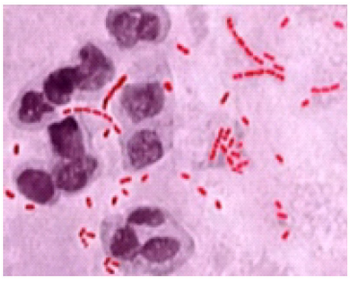
00:20:39

AIIMS 2019

- Organism: *Haemophilus ducreyi*
- Incubation period is 3-7 days (short)
- Clinical features
  - Ulcers are multiple, painful, non-indurated
    → Ragged undermined edges.
  - Floor is covered with yellowish necrotic tissue
    → Bleeds easily on touch

Important Information

- Ragged, undermined edges.
  - TB chare
  - Chancroid
  - Pyoderma gangrenosum

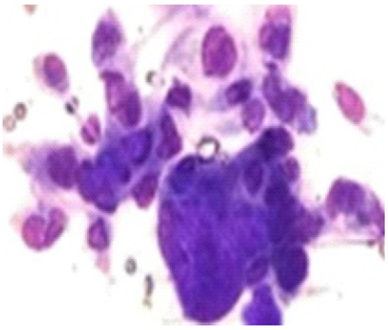
- Lymph nodes
  - Tender on examination
  - Suppurative
  - Usually unilateral
- Investigation
  - Gram stain of the discharge
    - → Gram-negative bacilli will be arranged in chains of 2-4
    - → School-of-fish appearance or Railroad-track appearance
  - Culture: Mueller-Hinton agar enriched with chocolate horse blood
- Treatment
  - Azithromycin 1 g single dose

    OR
  - Ceftriaxone 250 mg IM single dose

Herpes Genitalis

00:23:50

- Caused by: HSV-2 > HSV-1.
- Incubation period of 3-5 days.
- Stages
  - Primary - 1st episode, very painful, extensive
  - Secondary - less painful, less extensive
  - Latent - no clinical features, but transmission of infection is possible
- Characteristics of Lesions
  - Multiple, painful
  - Grouped vesicles
  - Coalescing erosions
  - It has a tendency to recur
- Lymph nodes: Bilateral painful lymphadenopathy
- Investigation
  - Tzanck smear: Multinucleated giant cells with acantholytic cells
  - Gold standard test is PCR
    - → Can differentiate between HSV-2 and HSV-1
- Treatment
  - Acyclovir: 200 mg 5 times/day OR 400 mg 3 times/day
  - Duration:
    - → Primary: 7-10 days
    - → Recurrence: 5 days



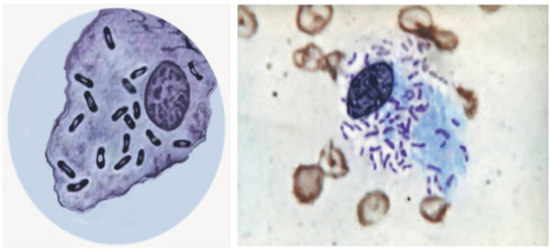
Donovanosis (granuloma Inguinale)

00.27.52

- Caused by *Klebsiella granulomatis*
  - AKA: Calymmatobacterium granulomatis
- Incubation: period of 10-30 days
- Ulcer characteristic: Granulomatous ulcer
  - Painless and non-indurated
  - Beefy red in color: Exuberant granulation tissue
  - Bleeds easily on touch

Yourwish

- Lymph nodes are not involved
  - Ulcers present over the lymph node appear as enlarged lymph node → Pseudo-bubos
- Investigation
  - Crushed smear + Wright Giemsa stain
  - Findings:
    - → Cluster of blue to black organisms
    - → Present inside the vacuoles of macrophages
    - → Safety-pin appearance
  - IOC: NAAT



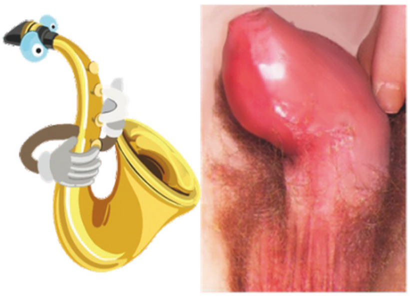
- Treatment
  - Azithromycin: 1 g weekly OR 500 mg daily × 3 weeks
  - Alternative: Doxycycline 100 mg BD × 3 weeks
  - Treatment should be given until the lesions have completely healed

Lymphogranuloma Venereum (lgv)

00.31.07

- Lymphogranuloma means lymphatic involvement
- AKA:
  - Climactic bubo
  - Lymphogranuloma inguinale
- Caused by: *Chlamydia trachomatis* serovars L1, L2, L3
- Long Incubation period of 10-30 days

- Primary stage: Transient ulcer (usually not seen)
- Secondary stage (main stage):
  - Painful, inflamed inguinal lymph nodes swelling
  - Bilateral or unilateral
  - Patient walks with a limp
  - Lymph nodes are fluctuant, matted, suppurates at multiple foci, leaving multiple sinuses → Buboes (no ulcers)
- Groove sign of Greenblatt
  - Involves both Inguinal + femoral lymphnodes
  - Separated by the Poupart ligament



- Tertiary stage
  - Stage of complication due to lymphatic obstruction
    - → Males: Saxophone penis
    - → Females: Esthiomene (vulval swelling)

- Treatment
  - Doxycycline: 100 mg BD × 21 days
  - Alternative: Erythromycin 500 mg QID × 21 days

Yourwish

Comparison Table - Genital Ulcer Diseases

00.35.00

Feature	Syphilis	Chancroid	Herpes genitalis	Donovanosis	LGV
Cause	*Treponema pallidum*	*Haemophilus ducreyi*	HSV	*Klebsiella granulomatis* (Calymmatobacterium granulomatis)	*Chlamydia trachomatis*
Incubation period	9-90 days	3-7 days	2-7 days	10-90 days	10-30 days
Ulcer type	Chancre	Soft chancre	Vesicles, erosions	Granulomatous ulcer (beefy red)	Transient ulcer
Ulcer number	Single	Multiple	Multiple	Single	Transient
Pain	No	Yes	Yes	No	No

	Syphilis	Chancroid	Herpes genitalis	Donovanosis	LGV
Base	Clean	Covered with greyish slough	Polycyclic erosion	Granulomatous	No
Edges	Clean, round edge	Undermined	Polycyclic	Overhanging edges	No
Induration	Positive	Negative	Negative	Negative	Negative
Bleeds on touch	No	Yes	Yes	Very easily	No
Lymph nodes - Laterality	B/L, shotty	U/L > B/L	B/L	No LN involvement (Pseudobubos)	B/L or U/L
Lymph nodes - Pain	No	Yes	Yes	No	Yes (suppurative)
Treatment	Benzathine Penicillin (Neurosyphilis)	Azithromycin	Acyclovir	Azithromycin	Doxycycline

DISCHARGE

00:37:35

- Two types:
  - Urethral discharge/ cervical discharge
  - Vaginal discharge

Urethral Discharge

Feature	Gonococcal Urethritis / Cervicitis	Non-Gonococcal Urethritis
Discharge	Profuse, purulent, copious, thick 	Watery, thin, scanty 

Incubation period	Short (2-5 days)	Long incubation
Symptoms	More urinary & constitutional symptoms - fever	Less urinary & constitutional symptoms
Organism(s)	Neisseria gonorrhoeae	Chlamydia, Mycoplasma, Trichomonas, HSV, Gardnerella
Gram stain of discharge	PMNs + Gram-negative diplococci Kidney/bean-shaped Culture: Thayer Martin medium NAAT 	Usually, no Gram-negative diplococci
Treatment	Azithromycin 1 g stat +Ceftriaxone 250 mg IM stat or cefixime 400mg orally	Only Azithromycin 1 g stat

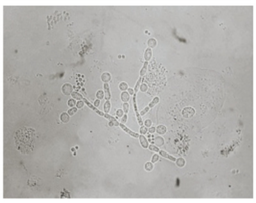
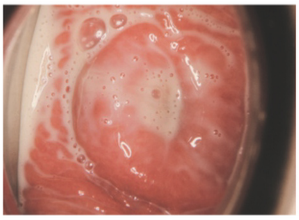
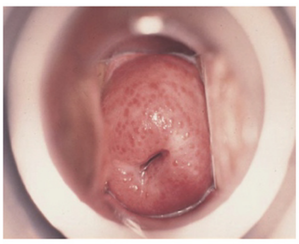
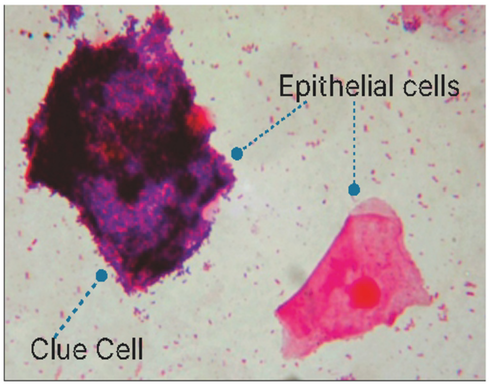
Vaginal Discharge

00:42:26

- M/c cause overall → Physiological

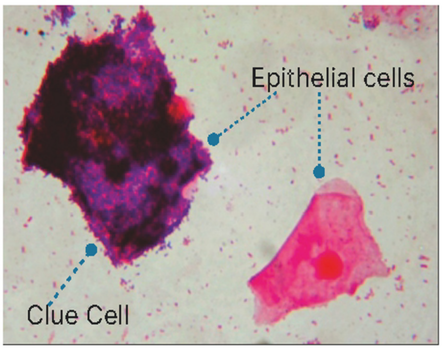
NEET PG 2019

- M/c pathological → Bacterial vaginosis > Candidiasis > Trichomonas

Feature	Vulvovaginal Candidiasis (VVC)	Trichomonas vaginalis	Bacterial Vaginosis (BV) Not considered an STI
Organism	*Candida albicans*	Flagellated protozoan	Altered vaginal flora
Discharge	White, curd-like, cottage cheese  	Greenish, frothy  	Thin, grey, homogeneous 
Itching/Pruritus	Present	May be present	Not prominent
pH	Acidic	Basic	Basic
Microscopy	KOH: Budding yeast cells	Wet smear: Pear-shaped organisms	Vaginal epithelial coated with epithelium: Clue cells ≥ 20%

Special Finding	—	Strawberry cervix (Red Punctace dots)	Whiff test positive (fishy odor) on 10% KOH
Seen in	Diabetes, pregnancy, and immunocompromised	STI	Not an STI Partner treatment is not needed
Pathogenesis	—	—	Altered flora: Replacement of lactobacilli by Gardnerella, Mycoplasma hominis, Ureaplasma, anaerobes
Diagnostic Criteria	—	—	Amsel criteria (≥3 required)
Treatment	Azoles	Secnidazole 2 g stat	• Metronidazole 500 mg orally BD × 7 days OR • Metronidazole get 0.75% one full applicator 5g intravaginally OD for 5 days OR • Secnidazole 2 g stat OR • Clindamycin cream 2%, one full applicator (5g) intravaginally at bedtime for 7 days

Amsel Criteria (3 Required)

Criterion	Finding
Vaginal discharge	Grey, homogeneous, thin white discharge smoothly coating vaginal walls
Clue cells  	≥ 20% vaginal epithelial cells studded with adherent coccobacilli
Vaginal pH	> 4.5
Whiff test	Fishy odor before or after addition of 10% KOH to the discharge

00:49:03

Anogenital Warts

- Condyloma acuminata
  - Caused by HPV (high-risk / low-risk)
  - A Large lesion is called: Buschke-Löwenstein tumor
    - → Caused by High-risk HPV
    - → Giant condyloma acuminata

Yourwish

STD COLOR-CODED KITS (NACO 2025)

00:50:25

NEET PG 2024, INICET 2024, FMGE 2024, 2025

- Treated based on a syndromic approach
- Mnemonic: Great Girls Won't Buy Red Yellow Bags

Kit	Composition	Targeted Syndrome
Kit 1 (Grey)	**GREAT- Grey discharge** **Azithromycin** **Trachomatis** Tab. Azithromycin 1000 mg + Tab. Cefixime 800 mg (single dose)	• Urethral Discharge Syndrome • Vaginal Discharge Syndrome (for cervicitis) • Painful Scrotal Swelling • Presumptive Treatment (PT)
Kit 2 (Green)	**Girls - green** Tab. Secnidazole 2000 mg + Tab. Fluconazole 150 mg (single dose)	• Vaginal Discharge Syndrome (for vaginitis)
Kit 3 (White)	**Wont - white board ABC** **A- Azithromycin** **B Benzathine penicillin** **C Chancroid** Inj. Benzathine Penicillin G 2.4 MU + Tab. Azithromycin 1000 mg (single dose) Disposable syringe 10 ml with 21G needle + Sterile water 10 ml	• Genital Ulcer Disease Syndrome (for Syphilis & Chancroid)
Kit 4 (Blue)	**Buy Bad** **B- Blue** **A-Azirthromycin** **D- Doxycyclin** Tab. Doxycycline 100 mg (28 capsules; BD × 14 days) + Tab. Azithromycin 1 g (single dose)	Genital Ulcer Disease Syndrome (for Syphilis & Chancroid when BPG unavailable or allergy present)
Kit 5 (Red)	**Red - Herpetic Hemorrhagic crusting** Tab. Acyclovir 400 mg (21 tablets as three times/day dose for 7 days)	Genital Ulcer Disease Syndrome (for Herpetic Ulcers)
Kit 6 (Yellow)	**Yellow - Lower abdominal pain (L)** Tab. Cefixime 800 mg single dose. Tab.Metronidazole 400 mg (28 tablets as twice/day dose for 14 days) Cap. Doxycycline 100 mg (28 capsules as twice/day dose for 14 days)	Lower Abdomen Pain PID
Kit 7 (Black)	**Black - Buboes** Tab. Doxycycline 100 mg (42 capsules as twice/day dose for 21 days)	Inguinal Bubo under Genital Ulcer Disease Syndrome LGV Proctitis under Anorectal Discharge Syndrome
Kit 8 (Brown)	**Brown** Tab. Cefixime 800 mg STAT dose Tab. Doxycycline 100 mg (14 capsules as twice/day dose for 7 days)	Anorectal Discharge Syndrome

MCQ

00:55:30

Q. A truck driver reports multiple painful genital ulcers on his scrotum following unprotected sexual intercourse, accompanied by painful lymph nodes. What is the most likely cause?

a. Chancre

b. Chancroid

c. Donovanosis

d. Herpes

Ans. b. Chancroid

Q. A truck driver presents with a single painless genital ulcer that appeared 3 weeks after an unprotected sexual encounter. There is associated non-tender inguinal lymphadenopathy. What is the most likely diagnosis?

a. Chancroid

b. Genital herpes

c. Primary syphilis

d. Lymphogranuloma venereum

Ans. c. Primary syphilis

Q. A 27-year-old individual develops a transient genital lesion that resolves spontaneously. About 2 weeks later, he presents with painful inguinal lymphadenopathy (buboes) and fever. Which Chlamydia trachomatis serovars are responsible for this infection?

a. L1, L2, L3

b. A-C

c. D-K

d. B, Ba

Ans. a. L1, L2, L3

Q. A patient presents with some watery discharge per urethra 2 weeks after an unprotected sexual intercourse. Which of the following is less likely to be the causative organism?

a. Chlamydia

b. Mycoplasma

c. Neisseria gonorrhoea

d. Trichomonas

Ans. c. Neisseria gonorrhoea

Q. Painless lesions over the vulval area, as shown below is suggestive of?

a. Genital herpes

b. Condylomata acuminata

c. Gonococcal vulvovaginitis

d. Condyloma lata

Ans. b. Condylomata acuminata

Q. A patient reports a history of genital ulcer in the last 3 weeks and now presents with a papular brown rash involving the palms. What is the next investigation you would order?

INICET MAY 2025

a. KOH

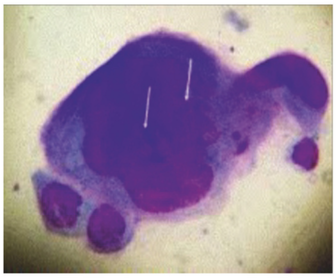
b. Serology

c. Tzanck smear

d. Chest X-ray

Ans. b. Serology

Q. A smear of a patient presenting with painful vesicular lesions and superficial erosions in the genital area is shown. What treatment would you initiate?



a. Acyclovir

b. Steroids

c. Penicillin

d. Azithromycin

Ans. a. Acyclovir

Q. Bubo is seen in which of the following conditions?

a. LGV

b. Herpes

c. Syphilis

d. Donovanosis

Ans. a. LGV

Important Information

- Condyloma lataseen in → Secondary syphilis
- Pseudo-bubo seen in → Donovanosis
- Groove sign → In LGV
- Brown macules palms/soles → Secondary syphilis
- Buschke-Löwenstein → Giant condyloma acuminata
- Painful multiple genital ulcers (undermined edge) with painful LAN → Chancroid
- Herpes → Polycyclic erosions & vesicles
- Pseudo buboes → Donovanosis
- D/D of painful buboes:
  - LGV → B/L, no ulcer, multifocal
  - Chancroid → U/L > B/L, ulcer, unifocal

Yourwish

7 PAPULOSQUAMOUS DISORDERS

PSORIASIS

00:00:20

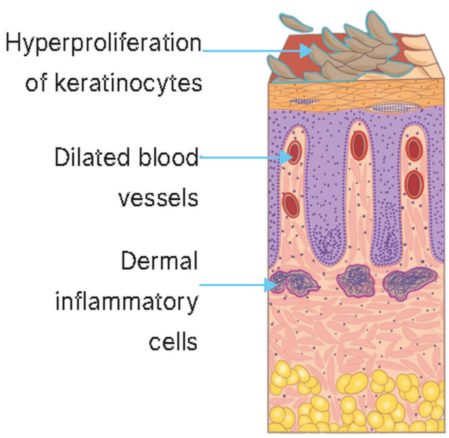
- Chronic disorder
- Relapsing remitting course
- Immune mediated

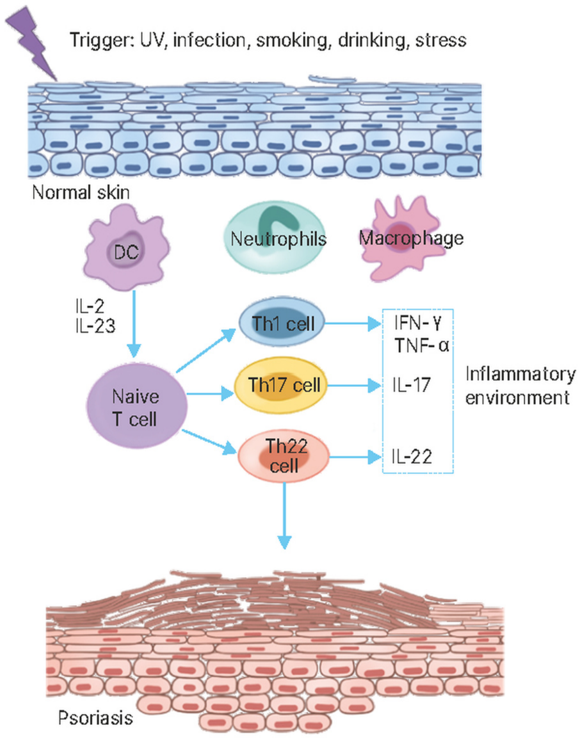
Etiology

- Hereditary
  - PSORS1
  - HLA Cw-6
- Environmental factors
- Immune mediation
  - Systemic chronic inflammation

Pathogenesis

- Starts in the dermis
- Inflammation
- Angiogenesis/vasodilation
- Reduced epidermal turnover time
  - ETT varies 50-75 days
  - Psoriasis 4 days
  - Rapid proliferation of keratinocytes
    → Because of the underlying inflammation of the dermis
- Immune response- Th-1 response
  - TNF alpha/INF gamma increases
  - Th17→IL-17
  - Th22→IL-22

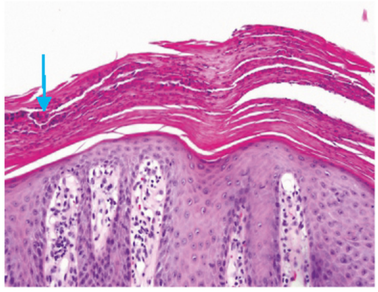
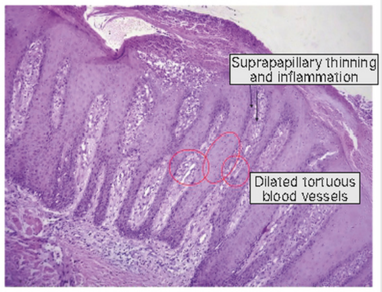


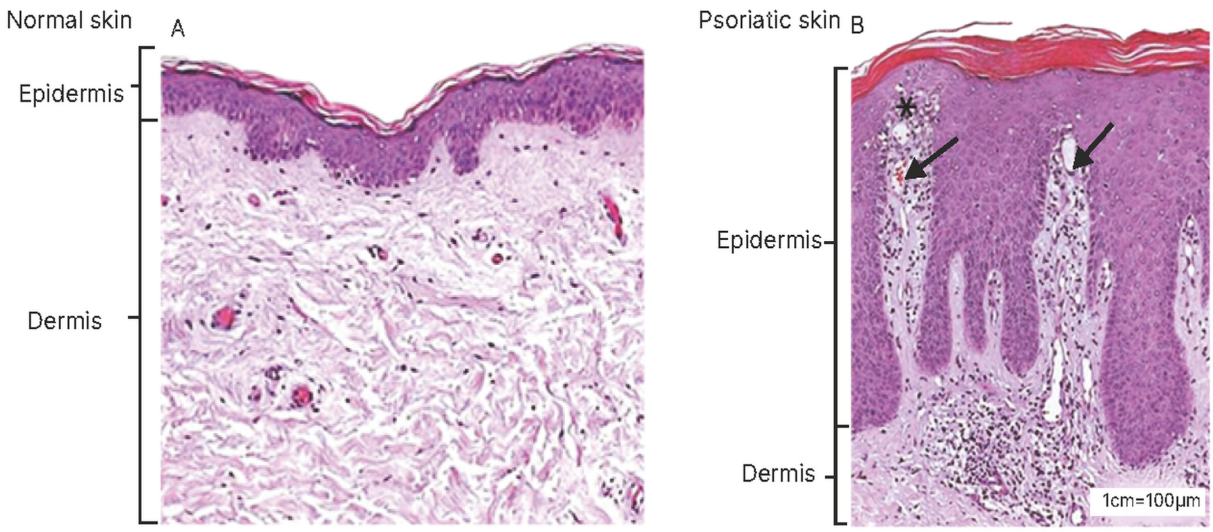


Histopathology

FMGE 2022

- Changes start in the dermis

STRATUM CORNEUM	• Hyperkeratosis • Munro microabscesses • Collection of neutrophils in the stratum corneum • Parakeratosis	
STRATUM GRANULOSUM	• Absent	
STRATUM SPINOSUM	• Acanthosis • Kogoj's spongiform pustules	
RETE RIDGES	• Elongated • Club shaped • Camel foot appearance(classical)	
DERMIS	• Supra papillary thinning • Inflammation • Dilated blood vessels	

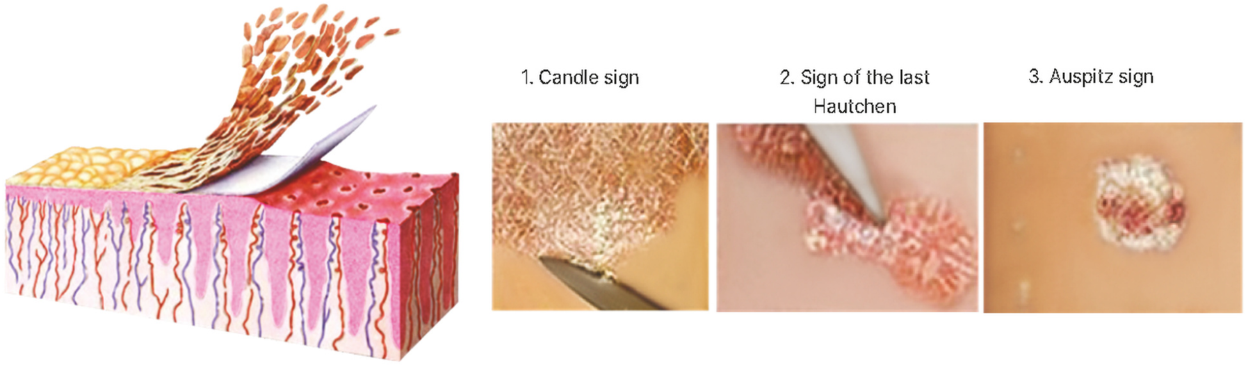


Clinical Features

- Asymptomatic
- Winter exacerbation
- Affects extensors- Elbows, Knees
- Classically, it looks like an erythematous indurated plaque which shows silvery white scales

Grattage Test

Signs of Psoriasis



- Accentuation of scaling
- Thin Berkeley's membrane
- AUSPITZ SIGN/ AUSPITZ TEST- Pinpoint bleeding points

Koebner's Phenomenon

- If the skin is scratched, along the lines of trauma, lesions of similar morphology develop
- Very imp feature of psoriasis
- 4 types
  - True koebnerization
    - → Psoriasis
    - → Lichen planus
    - → Vitiligo
  - Pseudo koebnerization
    - → Molluscum
    - → Warts
  - Occasional koebenerization
  - Dubious association with trauma

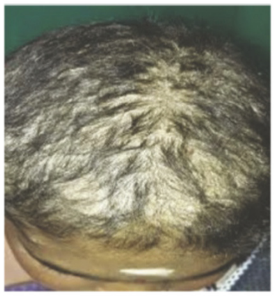
Psoriasis forms

Scalp psoriasis

- Affects scalps
- Crosses hairline
- Not itchy
- No alopecia

Pytriasis Amentatia

- Asbestos-like scaling on the scalp



Inverse Psoriasis

- Flexures involved
- Scaling not seen
- Less induration
- Erythematous symmetrical plaque
- No itching


Nail Psoriasis

- Pits are present on the nail plates
    - Deep Random Irregular Large (DRIL)
- MC nail finding seen in psoriatic nails
- Yellowish discoloration
- Subungual hyperkeratosis
- Oil drop sign or salmon patch on nail
- Translucent yellowish discolouration
- Onycholysis
- Most specific sign in nail psoriasis
- Finger nail > toe nail



Differentiate With Onychomycosis

- No pits
- No salmon patch
- KOH is positive
- Toenail > finger nail

Psoriatic Arthritis

00:18:14

- It involves joints
- Pain in joints

Moll And Wright Classification

Clinical pattern on presentation	% of patients
Asymmetrical aligoarthritis	50
Symmetrical polyarthritis	40
Distal interphalangeal arthritis	5
Arthritis mutilans	5
Spinla column involvement	40

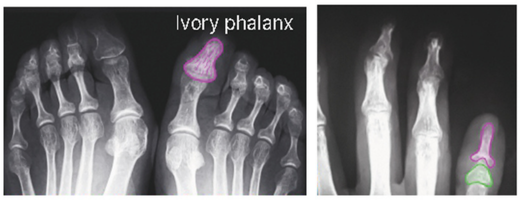
- Asymmetrical oligoarthritis → M/C pattern
- Distal interphalangeal arthritis → M/C joint

Sausage Joints

- DIP involved
  - Bulb-like swelling in the distal phalanx

X- Ray

- Pencil and cup deformity
- Ivory phalynx



Pencil in cup deformity

Differentiate Psoriasis And Other Arthropathies

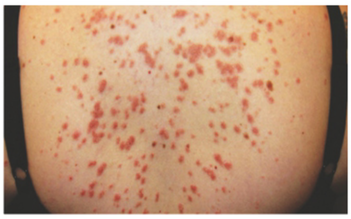
- Skin changes
- Nail changes
- Enthesitis
- Asymmetric DIP
- RA negative

Guttate Psoriasis

00:21:56

FMGE 2020, 2021 2023, NEET PG 2022, INICET 2022

- Children
- Preceding streptococcal infection /sore throat



Clinical Features

- Trunk involved
- Small erythematous papules and plaques
- Less scaly
  - Raindrop appearance → classical

Investigations

- ASLO
- Throat culture

Treatment

- Antibiotics like penicillin and amoxicillin
- Tonsillectomy for recurrent episodes

Unstable Psoriasis

- Pain, tenderness, and increased redness
- Constitutional symptoms- Fever, malaise, systemic symptoms
- Erythrodermic or pustular
- Aggravating factors

- Withdrawal of steroids
- Coal tar
- Pregnancy, stress, and infections
- Hypocalcemia

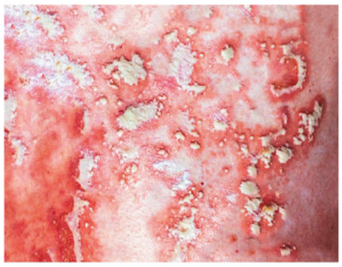
Erythrodermic Psoriasis

- Redness and scaling >90% of BSA

FMGE 2022

Pustular Psoriasis

- Visible pustules seen
- Fever, malaise
- Erythematous plaques and pustules are present
- Pustules are coalescing together to form lakes of pus
- AKA Von Zumbusch psoriasis



Treatment

- DOC- Acitretin

Impetigo Herpetiformis

00:28:20

- Pustular psoriasis happens in pregnancy
- 3rd trimester
- Recurs in subsequent pregnancy
- LBW
- **TOC**
    - Steroids or cyclosporin

AIIMS 2019

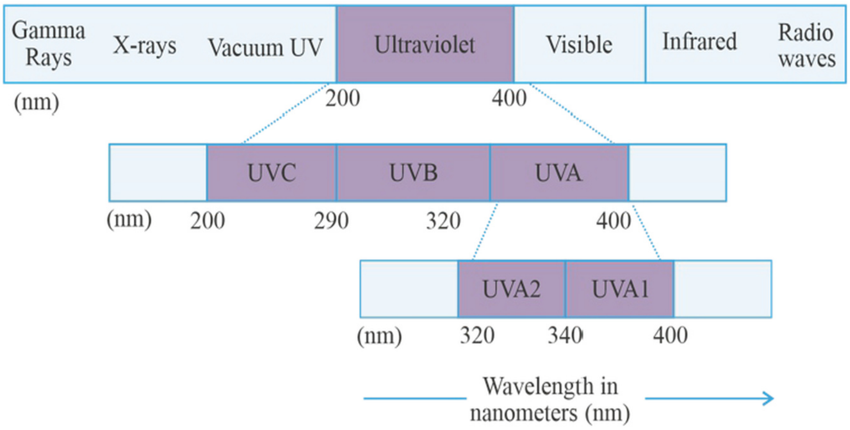
Treatment of psoriasis

Topical agents

- Criteria
    - <10% BSA involved
    - <10 PASI
- Agents
    - Emolients
    - Corticosteroid
    - Retinoids
    - Vit D analogues
    - Coal tar
    - Anthralin
    - Calcineurin inhibitors tacrolimus
    - Salicylic acid

Phototherapy

- UVA and UVB are used



UVB

- More commonly used
- Narrow band- UVB 311-313nm
- Thrice a week session
- Works well in psoriatic patients

Puva Phototherapy

- Psoralin + UVA
  - Topical
  - Oral
- Less commonly used than UVB
- Safer
- No risk of skin cancer
- No cataract

Targetted Phototherapy

- Excimer laser lamps and targeted UVB therapy
- 308nm xenon- chloride excimer laser
- Ultraviolet B radiation system consisting of a noble gas and a halide

Systemic Treatment

- TOC- Methotrexate
  - Especially in chronic plaques
  - Ps.arthritis
  - Used in dose 7.5-15 mg /week
  - Give folic acid as a supplement
  - Side effects of Methotrexate
  - Liver fibrosis- Monitor LFT
  - Decrease platelet count- Monitor CBC
- Acitratin- Oral retinoid
  - DOC pustular psoriasis
  - HIV positive patients
- Isotretinoin in acne
- Hyperlipidemia → monitor lipids
  - Monitor LFT
- Cyclosporin
  - Crisis drug
  - Only in unstable psoriasis
  - Side effects
    - → HTN- Monitor BP
    - → Hyperlipidemia
    - → Increase in creatinine levels- Monitor Creatinine levels

→ Hyperplasia of gums

- Newer Agents
  - Apremilast
  - PDE4 inhibitor

Biologicals

- Etanercept anti TNF-a
- Infliximab anti TNF -a
- Adalimumab anti TNF -a
- Ustekinumab inhibits IL-12,IL-23
- Secukinumab, Ixekizumab, anti IL-17A
- Guselkumab

PTYRIASIS RUBRA PILARIS

- Follicular erythematous papules
- Orangish hue
- Coalesce together → Islands of sparring


00:39:30

Examination




- Thickening of palms and soles → PRP SANDALS
- Erythematous scaly papules on Interphalangeal Joints → nutmeg crater papules

Types

- Classical adult onset PRP (type 1)
- Atypical adult onset PRP(type 2)
- Classical juvenile onset PRP (type 3)
- Circumscribed juvenile PRP(type 4)
- Atypical juvenile PRP(type 5)
- HIV related PRP(type 6)

Histopathology

- Checkerboard pattern
- Alternate hyperkeratosis/parakeratosis

Treatment

- Acitretin

LICHEN PLANUS

00:42:53

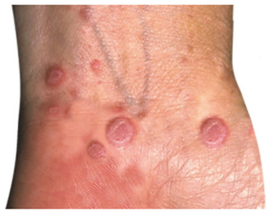
FMGE 2021

- Autoimmune T cell-mediated
- Drugs
  - Antihypertensive drugs
  - Dental amalgums

Clinical Features

FMGE 2023

- Skin, hair, nail, and mucosa are affected
- Associated with Pruritus (itching)
- Sites affected
  - Flexures- Wrist, underarms
- **Morphology of the lesions (5 Ps)**
  - Purplish/violaceous
  - Polygonal
  - Plan topped
  - Pruritic
  - Papules
  - Plaques
- Koebner's phenomenon is present
- Whitish streaks on applying oil, called Wickham's striae



Oral Mucosa

- Patient presents with difficulty in eating hot spicy food
- O/E, whitish lacy reticular pattern in buccal mucosa
- Maybe ulcerative lichen planus → premalignant condition

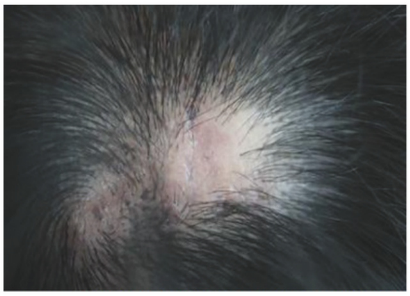
Nails

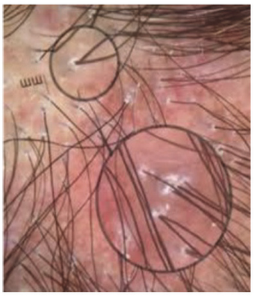
- Trachyonychia
- Longitudinal ridging→ MC nail finding
- Pterygium is the most specific nail finding for lichen planus

Trachyonychia

Hair

- Cicatracial alopecia
- Follicular violaceous papules on the scalp

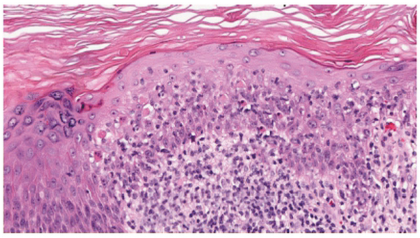




Histopathology

- Hyperkeratosis
- Acanthosis

Yourwish



- Hypergranulosis wedge-shaped
- Colloid/civatte bodies
- Apoptotic keratinocytes
- Basal cell shows degeneration
- Saw tooth rete ridges
- Band like infiltrate
- Max Joseph Space- Between epidermis and dermis is caused by dense inflammatory infiltrate

Treatment

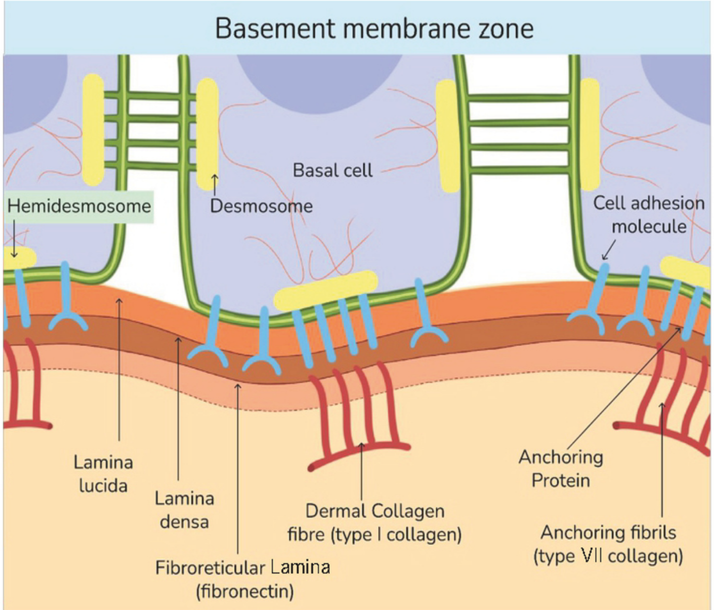
- Topical corticosteroid
- Calcineurin inhibitors
- Systemic oral CS dapsone, methotrexate, and azathioprine
- Phototherapy, narrow band UVB used here

Yourwish

8 IMMUNOBULLOUS DISORDERS

BASIC CONCEPT

- Formation of antigen-antibody complexes against the structural proteins of skin
- Leading to loss of cell adhesion and formation of vesicles and bullae



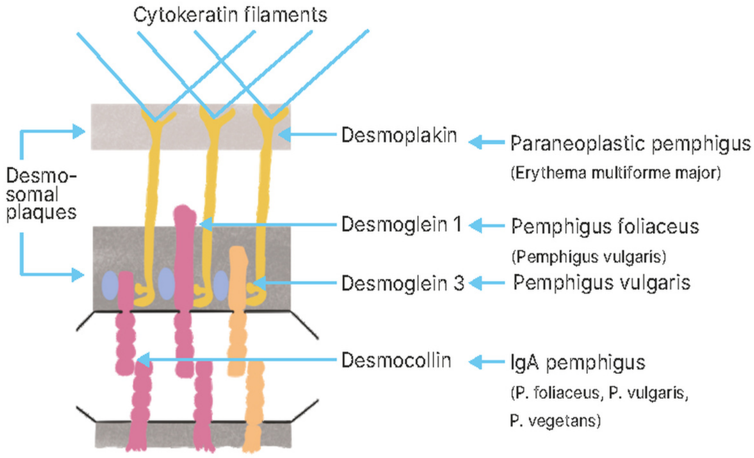
INTRAEPIDERMAL AND SUBEPIDERMAL DISORDERS

00.01.20

Intraepidermal disorders	Subepidermal disorders
Keratinocytes are bound by desmosomes ↓ Antibodies are directed against desmosomes ↓ Keratinocytes get separated from each other (intraepidermal split) ↓ An empty space created is filled with fluid (Bullae or vesicle) ↓ These bullae are covered by only few layer of epidermis above ↓ Hence flaccid bullae are formed	Keratinocytes are bound to basement membrane by Dermoepidermal junction(DEJ)/basement membrane zone ↓ Antibodies are directed against DEJ ↓ Keratinocytes get separated from basement membrane ↓ Separation between epidermis and dermis (subepidermal split) ↓ An empty space created is filled with fluid (Bullae or vesicle) ↓ These bullae are covered by full layer of epidermis above ↓ Hence tense bullae are formed
Aka Phemphigus group of disorders	Aka Phemigoid group of disorders

Desmosomal Antigens (Pemphigus)

Antigen	Disease
Desmoglein 1	Pemphigus foliaceus
Desmoglein 3	Pemphigus vulgaris
Desmoplakin	Paraneoplastic pemphigus
Desmocollin	IgA pemphigus



Pemphigus Classification

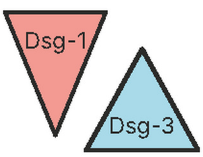
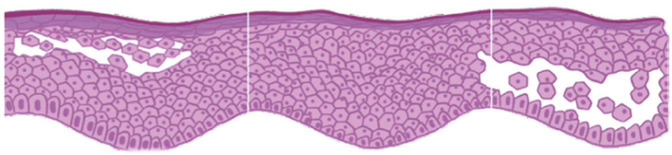
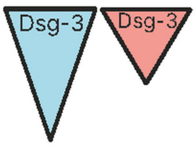
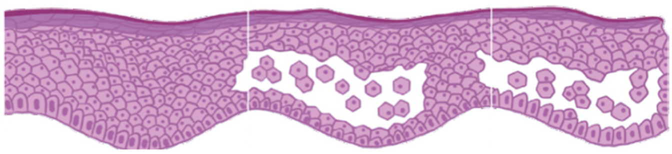
00:05:12

AIIMS 2018

Type	Form
Pemphigus Vulgaris (Dsg 3> 1)	Pemphigus vegetans; Localized → axilla
	Drug-induced
Pemphigus Foliaceus (Dsg 1)	Pemphigus erythematosus; Localized
	Fogo selvagem; Endemic
	Drug-induced
Paraneoplastic Pemphigus(Desmoplakin)	Desmoplakin
IgA pemphigus (Desmocolin)	Subcorneal pustular dermatosis
	Intraepidermal neutrophilic IgA dermatosis

Desmoglein Compensation Theory

00:06:20

Site	Anti-Dsg 1	Anti-Dsg 3	Anti-Dsg 1 , Anti-Dsg 3
Epidermis 			
Mucous Membrane 			

Yourwish

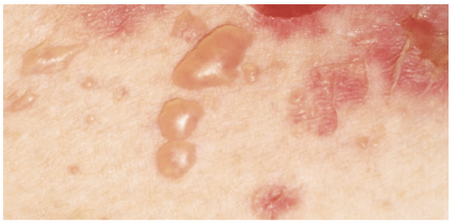
	Desmoglein 1	Desmoglein 3
Present in	• Superficial epidermis	• Basal layer of epidermis + mucosa
If destroyed	• Upper epidermis affected • Mucosa spared (Dsg3 compensates)	• Lower epidermis affected • Mucosa affected (Dsg 1 cannot compensate for Dsg3)
Seen in	• Pemphigus foliaceus	• Pemphigus vulgaris

AIIMS 2018

00:09:10

PEMPHIGUS VULGARIS (PV)

- Commonest form of pemphigus group
- Middle age: 40years
- Target: Desmoglein 3 > Dsg1

Clinical Features

- 100% mucosal involvement
- Painful non-healing oral erosions
- Flaccid bullae
- Bullae rupture easily in 1-2 days to leave erosions

Histopathology

- Supra-basal split (in S.spinosum and S.basale)
- Acantholysis
- Row of tombstone appearance

PEMPHIGUS FOLIACEUS

00:11.26

- Target: Desmoglein 1

Clinical Features

- No mucosal involvement
- Bullae rupture very early(in hours)
- Superficial crusted erosions in seborrheic distribution


Histopathology

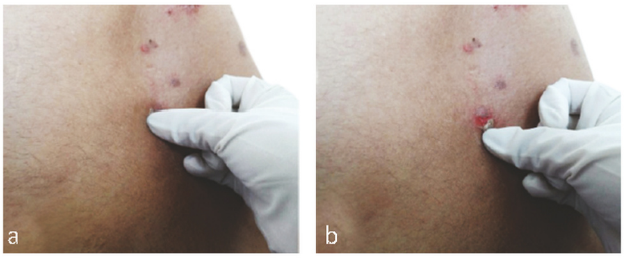
- Subcorneal split

Feature	Pemphigus Vulgaris	Pemphigus Foliaceus
Target antigen	Desmoglein 3 > Desmoglein 1	Desmoglein 1
Level of split	Suprabasal	Subcorneal
Common sites	Trunk, flexures	Seborrheic areas- face,neck,chest
Skin lesions	Flaccid bullae+erosions	Crusted erosions
Mucosal involvement	Present	Absent

Signs In Pemphigus Group

Nikolsky Sign

- Shearing force on normal skin near a bulla leads to skin peel off or forms new bullae
- Indicates disease is active
- Positive in pemphigus and SSSS
- Negative in subepidermal disorders



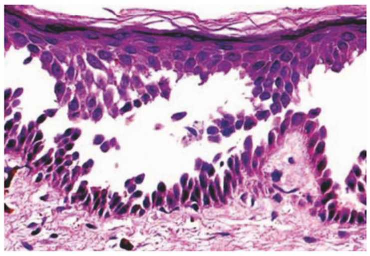
Type	
True Nikolsky sign	• Pemphigus • SSSS (Staphylococcal Scalded Skin Syndrome)
False Nikolsky sign	• Positive nikolsky in subepidermal disorders (e.g., bullous pemphigoid)
Pseudo Nikolsky sign	• Pseudo as it is because of necrosis of epidermal cells and not of acantholysis • Seen in SJS / TEN

Bulla Spread Sign

- Press on bulla spreads it
- Positive in both
  - Intraepidermal - Angular
  - Subepidermal - Rounded

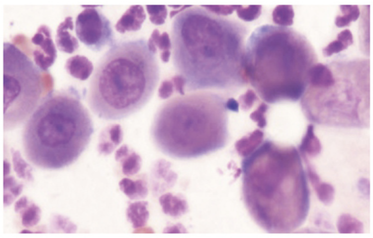
Histopathology In Pemphigus Group

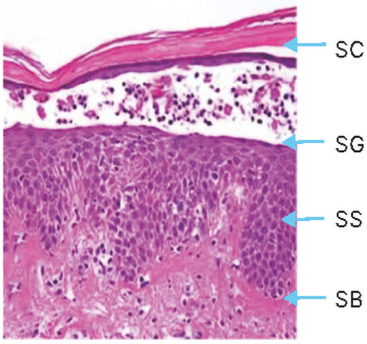
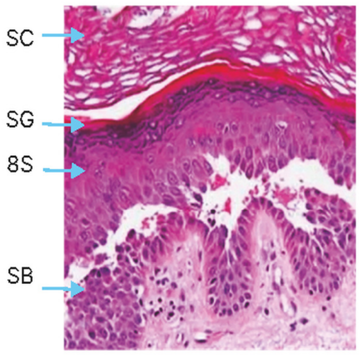
- Separation of Keratinocytes is called acantholysis



Tzanck Smear

- Bulla is ruptured and smear from the base is stained with giemsa stain
- Acantholytic cells/ Tzanck cells/ Acanthocytes are seen
  - Large round to oval cells
  - Nucleus occupy $\frac{7}{8}$ of the cell
- No multinucleated giant cells (MNG seen in herpes)



Pemphigus foliaceous	Pemphigus vulgaris
• Acantholytic cells	
• Subcorneal split 	• Supra-basal split  • Row of tombstone appearance

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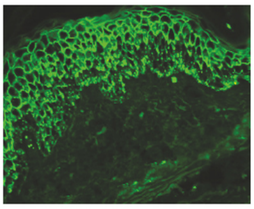
Direct Immunofluorescence

INICET 2023



- Gold standard for pemphigus diagnosis
- Fish-net / Chicken wire pattern
- Due to IgG..IgA deposition

00:24:30

Other pemphigus disorders

Endemic pf

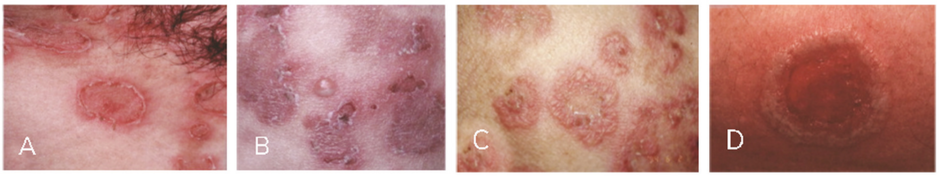
- Endemic to certain parts of South America (Brazil, Columbia etc)
- Risk factor - Arthropod bite (Black fly - *Simuliidae*)
- Head & neck involved first
- *Fogo selvagem*, Portuguese for 'wild fire'
- Mucous membranes - not involved
- Histologically and immunologically - identical to PF

Paraneoplastic Pemphigus

- Associated with malignancy
  - Commonest - Non-Hodgkin lymphoma
- Multiple target antigens
  - Dsg 1 and 3
  - Desmoplakin 1 and 2
  - Envoplakin,periplakin
  - 230 kDa bullous pemphigoid (BP) antigen 1
- Most severe disorder of pemphigus group
  - Multiple mucosal involvement
  - Tense and flaccid bullae
  - Lichenoid lesion
  - Contractures, scarring
- Anhalts Criteria

Iga Pemphigus

- IgA deposition
- Annular / Circinate lesions



Treatment For Pemphigus

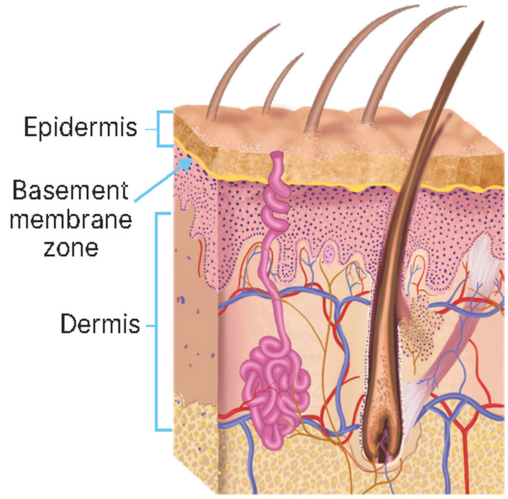
- TOC:
  - Oral Steroids + Immunosuppressants (Azathioprine, Cyclophosphamide, Mycophenolate)
- Pulse Steroid - High dose i.v steroids , 3 days/month for 3 months
- Rituximab
  - Intravenous biological
  - Anti Cd20

SUBEPIDERMAL DISORDERS

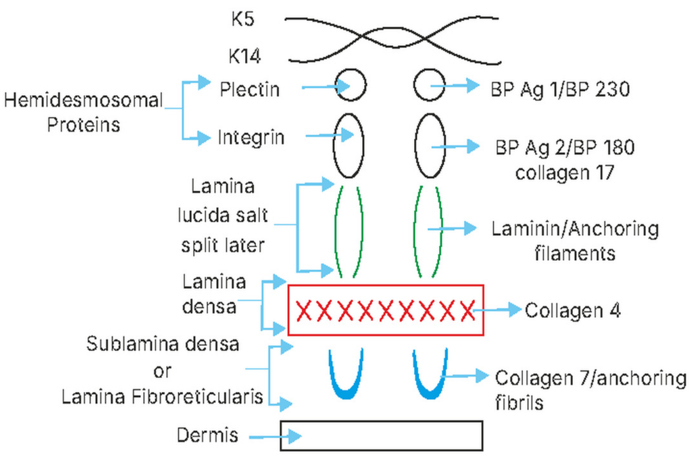
- Phemphigoid and Dermatitis herpetiformis (DH)

- Pemphigoid : Autoantibodies against DEJ or Basement membrane structure
- DH: Antibodies against epidermal transglutaminase

- C.F: Tense blisters and erosions and negative Nikolsky sign



Structure	Associated Protein / Component
Keratinocyte	K5 , K15
Hemidesmosomes	BP180 - BPAg 2 BP230 - BPAg 1
Lamina lucida	Laminin
Lamina densa	Collagen 4
Sublamina densa	Collagen 7/Anchoring fibrils



Disease	Target Antigen(s)	
Bullous pemphigoid	BP180, BP230	Hemidesmosome
Pemphigoid gestationis	BP180, BP230	
Linear IgA bullous dermatosis	BP180 (LAD-1)	
Cicatricial pemphigoid	BP180, Laminin, Integrin	Lamina lucida
Mucous membrane pemphigoid	BP180, Laminin 332	
Epidermolysis bullosa acquisita	Collagen VII	Sublamina densa
Bullous lupus erythematosus	Collagen VII	
Dermatitis herpetiformis	Transglutaminase	Epidermis

- Mnemonic for order of disorders wrt to order of antigen present
  - First we Pray, then Can Eat.

    → F: Foliaceus
    → V: Vulgaris
    → P: Pemphigoid
    → C: Cicatricial
    → E: EBA

Yourwish

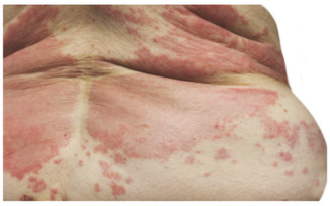
Bullous Pemphigoid (Bp)

00:35:33

INICET 2021, 2023

- Age: Elderly (60-80 yrs)
- Target: BP180 & Bp230

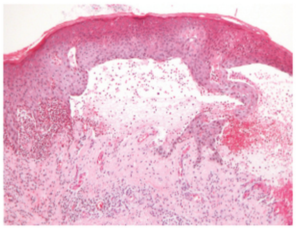
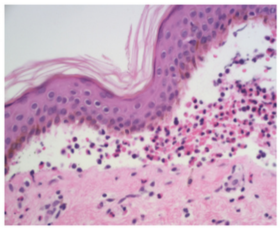
Clinical Features




- Pre-bullous stage:
  - Itchy , erythematous,urticarial lesions
- Bullous stage:
  - Tense bullae
  - Rupture after few days
  - Leaves behind hemorrhagic crust on healing
- Mucosa → Only 30%
- Nikolsky sign → Negative
- Bulla Spread sign positive
- Tzanck smear
  - Few eosinophils
  - No acantholytic cells

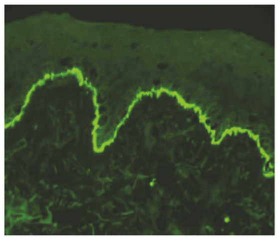
Histopathology

- Subepidermal split
- Eosinophilic spongiosis

DIF

- Linear IgG and C3 deposition along BMZ



Treatment

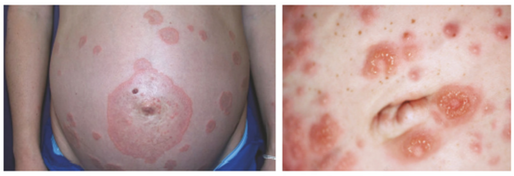
- Mild-topical steroids
- Severe-Oral steroids,Dapsone,nicotinamide,tetracyclines,other immunosuppressants

Features	Pemphigus	Pemphigoid
1. Age of onset	40-60 years	60-80 years
2. Bullae	Flaccid (painful erosions)	Tense
3. Mucosal involvement	Present	Absent
4. Intraepidermal bullae		
5. Nikolsky sign		
6. Acanthocytes		
7. Row of tombstones		
8. Bulla spread sign	Present	Present

Pemphigoid Gestationis

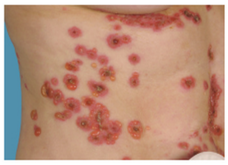
00:40:00

- Bullous pemphigoid in pregnancy (Herpes gestationis)
- Typically in 3rd trimester
- Also in Trophoblastic tumours
- HG factor binds to Bp180
- C3 deposition> Igg
- Periumbilical- urticarial itchy lesions → tense vesicles and bullae
- Treatment → Steroids



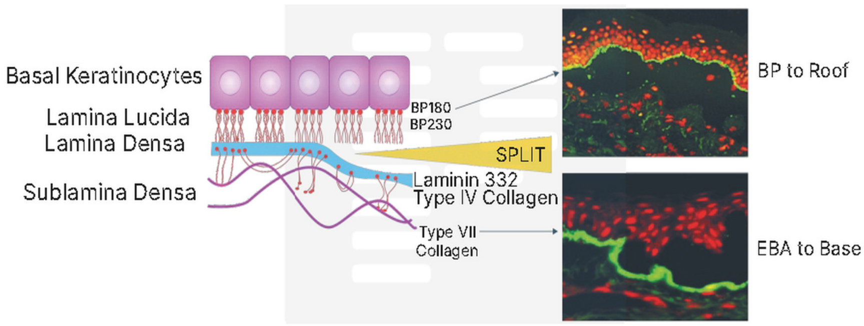
Linear Iga Disease

- Linear IgA deposition
- Tense bullae- Cluster of jewels / String of pearls
- Ag: LAD1
- Ab: IGA
- In children, called as
  - Chronic bullous disease of childhood (CBDC)
  - Perioral involvement
- Treatment: Dapsone



Salt Split Technique

- Used to differentiate BP and EBA
- Biopsy sample kept in 1 molar NaCl
- Sample splits at lamina lucida.
  - BP → Ag in hemidesmosome → immunofluorescence at roof of split
  - EBA → Ag in sublamina densa→immunofluorescence on floor of bulla



AIIMS 2020

Dermatitis Herpetiformis (DH)

00:45:45

Association

- Gluten sensitive enteropathy (Celiac)
- HLA DQ2, Dq8

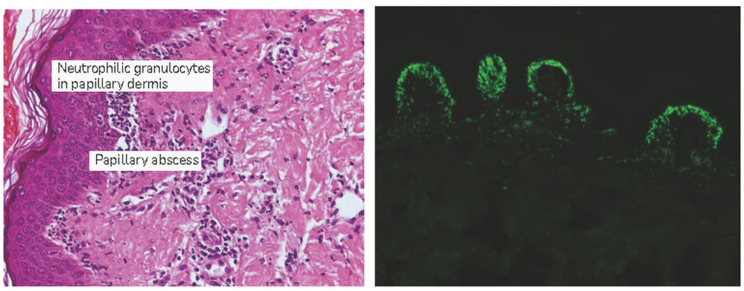
Target

- Epidermal transglutaminase

NEET PG 2025

Clinical Features

- Dermal symptoms
  - Recurrent intensely itchy exfoliated papules
  - On extensor surfaces- buttocks,elbows,knees
  - No tense bullae
- GI symptoms - Abdominal pain and diarrhea

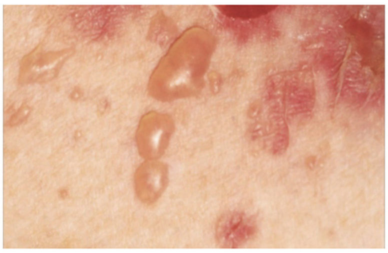


Histopathology
- Papillary Neutrophilic microabscesses in dermal papillae

DIF
- Immunofluorescence at papillary tips(Granular IgA deposition)

Treatment
NEET PG 2024
- Dapsone + Gluten free diet
- Avoid: Barley, Rye ,Oats, Wheat(BROW)
    - Oats is comparatively safe among BROW
- Safest: Rice, Maize

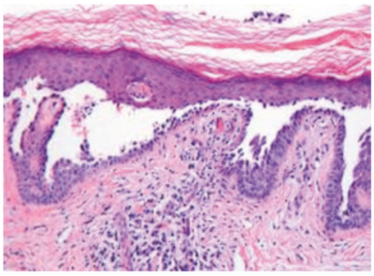
Q. A patient presents with a flaccid bullous lesion involving the oral cavity and the skin. He has lesions as shown below. Acantholytic cells are seen on Tzanck smear. What is the most probable diagnosis?



A. Pemphigus foliaceus
B. Pemphigus vulgaris
C. Dermatitis herpetiformis
D. Bullous pemphigoid

Answer: B

Q. What does the histopathology image below indicate?



A. Psoriasis vulgaris
B. Leishmaniasis
C. Mycosis fungoides
D. Pemphigus vulgaris

Answer:D

Q. What is the preferred treatment for the formation of blisters beneath the epidermis, where neutrophils are found at the tips of the dermal papillae?
A. Rituximab
B. Dapsone
C. Cyclosporine
D. Azathioprine

Answer: B
- Case of dermatitis herpetiformis

Q. What is the probable diagnosis for a 65-year-old male who presents with *itchy tense bullae* on his limbs, which eventually rupture after a few days leaving hemorrhagic crusts?
A. Bullous pemphigoid
B. Pemphigus vulgaris
C. Dermatitis herpetiformis

D. Linear iga dermatosis

Answer: A

Statement 1 - A 59-year-old patient presents with flaccid bullae. Histopathology shows a suprabasal acantholytic split.
Statement 2 - The row of tombstones' appearance is diagnostic of Pemphigus vulgaris.
A. Statements 1 & 2 are correct, 2 is not explaining 1
B. Statement 1 is incorrect
C. Statement 1 and 2 are incorrect
D. Statements 1 and 2 are correct and 2 is the correct explanation for 1

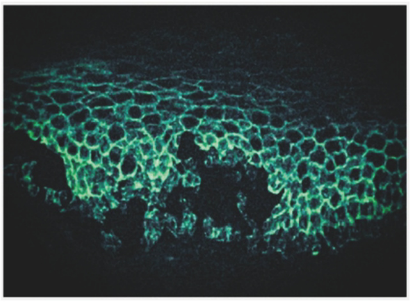
Answer: A

Q. A 30-year-old male presents with flaccid bullae on an erythematous base and erosions over the oral mucous membrane. The blisters develop painful erosions on rupture. What would be the most likely finding on an immunofluorescent examination of the skin biopsy of this patient?

A. Linear iga deposition in dermoepidermal junction
B. Linear igg deposition in dermoepidermal junction
C. Fish net igg deposition in epidermis
D. Granular deposits of IgA in dermal papillae

Answer: C

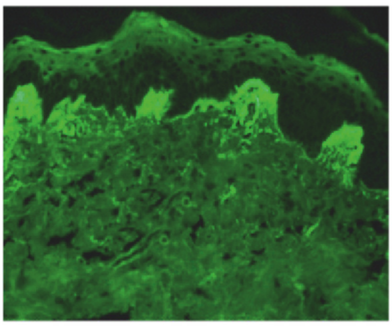
Q. Identify the condition based on the immunofluorescence pattern shown in the image.



A. Lupus vulgaris
B. Pemphigus vulgaris
C. Bullous pemphigoid
D. Impetigo

Answer: B

Q. A woman presents with a pruritic rash on the elbows, buttocks with recent diagnosis of gluten sensitive enteropathy. On immunofluorescence IgA deposition is seen as shown in the image. What is the most likely diagnosis?



A. Dermatitis herpetiformis
B. Pemphigus vulgaris
C. Bullous pemphigoid
D. Psoriasis

Answer: A

LMRP

00:54:00

- Pemphigus Vulgaris vs Pemphigus Foliaceus

Pemphigus vulgaris	Pemphigus Foliaceus
Mucosal involvement present	No mucosal involvement
Flaccid bullae	Crusted erosions (bullae rupture early)
Suprabasal split	Subcorneal split

- Pemphigus Vulgaris vs Bullous Pemphigoid

Pemphigus Vulgaris	Bullous Pemphigoid
Flaccid bullae	Tense bullae Itchy urticarial lesions
MINAR positive: • M → Mucosal involvement • I → Intra-epidermal split • N → Nikolsky positive • A → Acantholytic (Tzanck) cells • R → Row of tombstone	MINAR negative

- Zanck Smear Confusion
  - Pemphigus → Acantholytic cells
  - Herpes → Acantholytic cells + Multinucleated giant cells
- Important Target Antigens
  - Desmoglein 1 → Pemphigus foliaceus
  - Desmoglein 3 → Pemphigus vulgaris
  - BP180 & BP230 → Bullous pemphigoid
  - Epidermal transglutaminase → Dermatitis herpetiformis
- Characteristic Findings
  - Row of tombstone → Pemphigus vulgaris
  - Fish-net pattern (IgG) on DIF → Pemphigus vulgaris
  - Linear IgG + C3 deposition → Bullous pemphigoid
- BP vs EBA Differentiation
  - Salt split technique:
    → Split at lamina lucida
      - BP → Deposition on roof
      - EBA → Deposition on floor
- Dermatitis Herpetiformis
  - Target → Epidermal transglutaminase
  - Treatment → Dapsone
  - Gluten Avoided
    → Barley
    → Wheat
    → Oats

Yourwish

  - Safe:
    → Maize
    → Rice
- Types of Nikolsky Sign
  - True Nikolsky → Pemphigus, SSSS
  - False Nikolsky → Sub-epidermal disorders
  - Pseudo Nikolsky → SJS/TEN
- Order of Disorders (Based on Target Level)
  - Mnemonic: First we Pray, then Can Eat.
    → F → Foliaceus
    → V → Vulgaris
    → P → Pemphigoid
    → C → Cicatricial pemphigoid
    → E → EBA

9 SYSTEMIC DISEASES AND SKIN

CONNECTIVE TISSUE DISORDERS

00:00:20

FMGE 2023

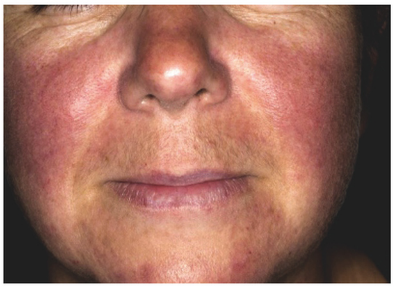
INICET 2021, 2022

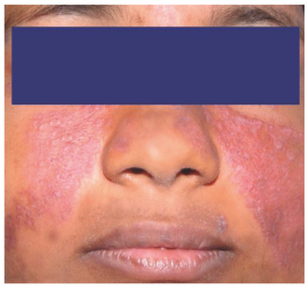
- Autoimmune inflammation
- Skin + Internal organ involvement
- Presence of autoantibodies

ACLE

FMGE 2019

- Acute cutaneous lupus erythematosis
- Malar rash seen on the skin /butterfly rash
- Photosensitivity
- MC in females
- Persistent erythema is present on the convex area of the face, with sparing of the nasolabial folds



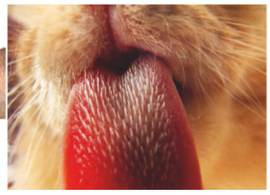


Chronic Cutaneous Le/Discoid Lupus Erythematosis

- Discoid lupus erythematosus
- 3 zones- Present on face > neck > body
  - Central atrophy
  - Middle activity
    - → Perifollicular plugging
    - → Scaling
  - Zone of hyperpigmentation
- Removal of the follicular plugging shows the tin-tack/cat's tongue/Carpet tack sign
- Autoantibodies
  - Screening test: ANA
  - Specific test: dsDNA/Anti-smith antibodies

Discoid Lupus Erythematosus

Cat's Tongue



Carpet tack

Tin Tack

Treatment

- Antimalarials/HCQs are commonly used
- Steroid/Tacrolimus may be used

Neonatal Le

- Caused by the transplacental transfer of antibodies
- Erythematous, slightly scaly eruption on the face and periorbital skin (raccoon sign/owl eye sign/eyemask sign)
- Positive Ro/SSA antibody

DERMATOMYOSITIS

00:04:35

FMGE 2023

INICET 2021, 2022

- Muscle involvement- Proximal group of muscles
  - Help to raise hands
  - Walking from the chair
  - Getting up
- Skin involvement- Pathognomic signs
  - Gotrons papules
  - Gotrons sign

Gottrons Papules

- Confluent violaceous macules/papules erythematous seen on the interphalangeal joint/metacarpal joint

Gottron Sign

- Confluent violaceous macules/papules erythematous around the periorbital area
  - Called a heliotrope rash
- Specific sign, but not pathognomic

Investigations

- ANA positive
- Antisynthetase or anti-Jo-1 antibodies
- Bohan and Peter's criteria for dermatomyositis

Treatment

- HCQS
- Methotrexate

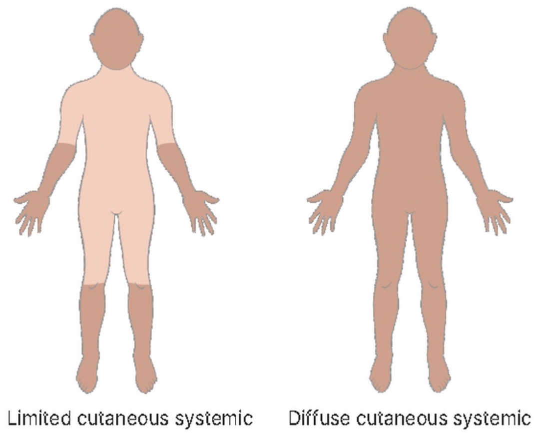
SYSTEMIC SCLEROSIS

00:08:30

- Sclerosis of the skin
- Skin is indurated + systemic features

Types

- Limited type
  - Face, distal arm, and legs are involved
  - Antitopoisomerase positive
- Diffuse type
  - Anti-scl-70 positive antibody



Clinical Feature

- Raynaud's phenomenon
- Dysphagia/reflux
- Internal organ involvement- GIT and lung (fibrosis)
- Induration of skin
  - Tightening of skin
  - Jawline becomes prominent
  - Teeth more visible
  - Mask-like facies
  - Telangiectasia on the face
  - Perioral furrowing
- Hands involved
  - Sclerodactyly- Contractures seen at joints
- CREST syndrome
  - Calcinosis- Calcium deposits in the skin
  - Raynaud's phenomenon- Spasm of blood vessels in response to stress/cold
  - Esophageal dysfunction- Acid reflux and a decrease in the motility of the esophagus
  - Sclerodactyly- Thickening and tightening of the skin on the fingers and hands
  - Telangiectasis- Dilation of capillaries causing red marks on the skin surface

NUTRITIONAL DISORDERS OF SKIN

00:12:30

Vitamin A Deficiency

NEET PG 2021, FMGE 2019, 2023

- Earliest sign- Night blindness
- Earliest skin manifestations- Dryness
- Phrynoderma (toad skin)- Rough hyperkeratotic papules on elbows and knees (asymptomatic)
- Other vitamin deficiencies and fatty acid deficiencies also show this

Vitamin B3 Defeciency

NEET PG 2023

- Causes a disorder called pellagra
- Seen in
  - Maize eaters
  - Alcoholics
  - Hartnup disease

Clinical Features

- 4D
  - Dermatitis
  - Diarhea
  - Dementia
  - Death
- On photoexposed parts
  - Subacute eczema
  - Cassal's necklace appearance

Acrodermatitis Enteropathica

00:16:32

- Caused by zinc deficiency
- Autosomal recessive
- ZIP 4 transporter protein
- Occurs after 6 months of age (weaning period starts)
- Triad
    - Dermatitis (periorifacial & acral)
    - Alopecia
    - Diarrhea

METABOLIC DISORDERS

00:18:51

Granuloma Annulare

- Asymptomatic granulomatous disorders are seen in patients with DM and hypothyroidism
- Sites- Dorsa of hands and feet (photo-exposed areas)

Clinical Features

- Asymptomatic ring/arc-shaped lesions with a peripheral granulomatous border with central clearing
- Overlying skin is normal

HPE

- Necrobiotic granulomas

Sarcoidosis

- Granulomatous disorders of the skin and systemic
- Organs affected
    - Pulmonary
    - Peripheral LN
    - Skin
    - Eyes- Uveitis

Specific

- Lupus pernio
    - Granulomatous, erythematous, raised lesions on the face with normal overlying skin
- Angiolupoid
    - Telangiectasia
- Diascopy- Apple jelly nodules seen

Non Specific Lesions

- Erythema nodosum

HPE

- Necrobiotic naked granulomas- No peripheral lymphocytes

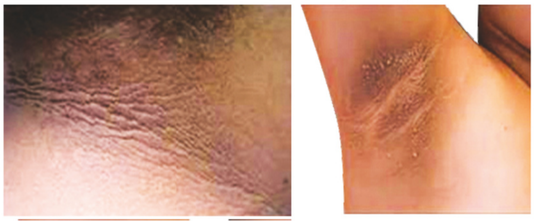
- Schaumann bodies
- Asteroid bodies

Treatment
- Steroids
- Antimalarials

ACANTHOSIS NIGRICANS

00:23:15

NEET PG 2019, 2022, FMGE 2019



- On flexures of skin, like the neck, axilla, & groin
- Hyperpigmented velvety texture of skin
  - Seen in patients obese, diabetic, with insulin resistance, & OCP
  - Increase IGF-1
- Overlying the acanthosis nigricans, sin tags are present
- Can be benign or malignant (i/c/o associated with underlying malignancy called paraneoplastic dermatosis)

Malignant A.N
- Rapid onset of lesion
- More generalized
- B/L symmetrical
- Tripe of palms
- Sign of lesser threat
- A/w Adenocarcinoma of GIT

Sign of Leser_Trelat

- Paraneoplastic dermatosis
- Sudden eruption of seborrheic keratosis on the trunk
- Rough hyperpigmented, stuck-on lesions on the skin

HENOCH-SCHONLEIN PURPURA (HSP)

00:27:18

- Systemic small vessel vasculitis (inflammation of vessels)
- Purpura- Doesn't blanch on pressure
  - Palpable: Seen in vasculitis
  - Non-palpable: Seen in platelet and clotting disorders
- Age- Children
- Preceded usually by infection/drugs

Clinical Features

- Palpable purpura is seen
- IgA-containing immune complexes
- Organs affected
  - Skin
  - Legs/buttocks

  - Palpable purpura
- GI tract
  - Abdominal pain
  - Diarrhea
  - Bloody stools
- Joints- Arthralgias
- Kidneys
  - Proteinura
  - Hematuria

Treatment
- Self resolving
  - Cochicine
  - Steroids

NEUTROPHILIC DERMATOSIS

00:30:33

- Neutrophilic collection
- 3 conditions
  - Pyoderma gangrenosum
  - Sweet syndrome
  - Behcet's disease

Pyoderma Gangrenosum
- Name is a misnomer, as there is no bacterial infection
- Ulceration of the skin associated with an underlying disorder like
  - IBD
  - Rheumatoid arthritis
  - Hematological malignancy
  - Monoclonal gammopathy
- Diagnosis of exclusion
  - All tests (microbial, autoimmune) should be negative

Clinical Features
- Painful lesions
- Ulcers with undermined edges with a violaceous hue
- Heals typically with cribriform scarring

Sweet Syndrome
- Acute febrile neutrophilic dermatosis
- More in females

Clinical Features
- Fever
- Upper trunk has erythematous papules, plaques, and oedematous (pseudovesiculation)

Treatment
- Steroids
- Potassium iodides

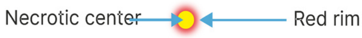
Behcet's Disease


Relapsing uveitis


Recurring genital ulcers


Recurring oral ulcers

Painful Ulcers



- Triad
  - Recurring genital ulcers
  - Recurring oral ulcers
  - Relapsing uveitis
- Necrotic centres are present
- Painful ulcers with surrounding erythema
- Ocular
  - Post uveitis (retinal vasculitis)- most diagnostic
  - Anterior uveitis,hypopyon
- Joint
  - Non erosive
  - Asymmetrical seronegative oligoarthritis MC knee
- Multisystem involvement: Pulmonary, cardiac, GI, & neurological
- Pathergy positive- Development of a papule at the site of venepuncture

ERYTHEMA NODOSUM

00:35:50

- MC panniculitis
- Inflammation of the panniculus and subcutaneous fat
- Acute onset and self-limited
- Cutaneous reactive process triggered by a wide variety of infectious and inflammatory disorders, like TB, Crohn's, & Sarcoidosis
- Present on the anterior aspect of the shin- Painful erythematous nodules heal without scarring

Course
- Spontaneous resolution
- Tendency to recur

HPE
- Septal panniculitis without vasculitis
- Miescher radial granulomas

REACTIVE ARTHRITIS/REITER'S DISEASE

00:37:21

- HLA-B27, B51
- Triggers
  - GI infection
  - HIV
  - NGU (Non-gonococcal urethritis), AKA Sexually acquired reactive arthritis

Clinical Features

- Triad
  - Polyarthritis
  - Urtethristis
  - Non-gonococcal conjunctivitis
- Keratoderma blenorhagicum
  - Hyperkeratotic papules on palms and soles
- Circinate balanitis
  - Circular erosions are painless on the glans penis

PYQs

00:39:42

Q. Match the following dermatological manifestations with their corresponding Vitamin deficiencies:

1. Phrynoderma	a. Vitamin A deficiency
2. Dyssebacia	b. Riboflavin deficiency
3. Casal's Necklace	c. Niacin deficiency
4. Corkscrew Hair	d. Vitamin C deficiency

A. 1-d, 2-c, 3-6, 4-a
B. 1-c 2-d, 3-a, 4-b
C. 1-a 2-b 3-c 4-d
D. 1-a 2-d. 3-b, 4-c

Ans: C

Q. The following lesion was noticed in a patient with a history of significant weight gain. What is the diagnosis?

A. Acanthosis nigricans
B. Leser-trélat sign
C. Actinic keratosis
D. Intertriginous candida

Ans: A

Q. Which skin disease is associated with sarcoidosis, presenting as violaceous, shiny, and indurated plaques commonly affecting the nose, cheeks, ears, and lips?

A. Löfgren syndrome
B. Erythema nodosum

C. Lupus pernio
D. Naked granulomas

Ans: C

Q. Which of the following mineral deficiencies is associated with poor wound healing, dermatitis, diarrhoea, and alopecia?
A. Iron
B. Calcium
C. Magnesium
D. Zinc

Ans: D

Q. A woman with diabetes mellitus presents with an asymptomatic skin lesion present for the past year. On examination, there is a non-scaly, annular lesion as shown in the image. There is no itching or pain. What is the most likely diagnosis?

A. Tinea corporis
B. Granuloma annulare
C. Annular lichen planus
D. Annular psoriasis

Ans: B

Q. A 28-year-old female presents to the rheumatology clinic with complaints of skin changes on her hands. Upon examination, you notice erythematous papules and plaques overlying the metacarpophalangeal and interphalangeal joints of her hands. The skin changes are symmetric and not itchy. The patient denies any history of trauma or exposure to irritants. What is the most likely clinical sign observed in this patient?

A. Livedo reticularis
B. Gottron's papule
C. Koebner phenomenon
D. Pitting edema

Ans: B

Q. A patient presents with severe pain and swelling in his knee joint for 10 days. He also complains of pain and discomfort during urination. He says that he had diarrhea one month ago, and he has been unwell since then. What is the most likely diagnosis?

FMGE Dec 2021

A. Reactive arthritis
B. Enteropathic arthritis
C. Rheumatoid arthritis
D. Psoriatic arthritis

Ans:: A

Q. A 7-year-old boy has non-blanching rashes on the legs and buttocks. He also complains of joint pains, abdominal pain, vomiting, and blood in the stool. Lab Investigations revealed a normal platelet count, and urine analysis shows haematuria +++ and proteinuria +. What is the diagnosis?

A. Systemic lupus erythematosus (sle)

B. Henoch schonlein purpura (hsp)

C. Immune thrombocytopenic purpura (itp)

D. Polyarteritis nodosa (PAN)

Ans: **B**

Q. A patient presented with diarrhea, dermatitis, and dementia. Which of the following vitamin deficiencies would you suspect in this patient?

A. Vitamin b3 deficiency

B. Vitamin b1 deficiency

C. Vitamin b6 deficiency

D. Vitamin B12 deficiency

Ans: **A**

LAST MINUTE REVISION POINTS

00:43:25

- Tintack sign- Chronic cutaneous LE
- Pathognomic sign of dermatomyositis- Gottrons papules & Gottrons sign
- Heliotrope rash seen in Dermatomyositis
- Toad skin appearance- Phrynoderma
- Cassal's neck- Pellagra
- 3D of pellagra
  - Diarrhea
  - Dementia
  - dermatitis
- AN associated with obesity, insulin resistance, metabolic syndrome, & OCP
- Triad of Behçet's disease- Recurrent painful orogenital ulcers with relapsing uveitis
- Reactive arthritis- Prior h/o GI infections/urethritis; Triad- Urethritis, Conjunctivitis, joint involvement; Skin- Keratoderma Blanorrhagicum & Circinate balanitis

COMMON ERRORS

- Heliotrope rash- Dermatomyositis
- AN paraneoplastic- No skin malignancy, i/c/o malignancy adenocarcinoma of the GIT
- Dermatitis, alopecia/diarrhoea- Aacrodermatitis enteropathica
- Palpable- Vascultis
- Non-palpable purpura- Platelet clotting disorders
- Tests in pyoderma gangrenosum- None, diagnosis of exclusion

10 PIGMENTARY DISORDERS

SKIN COLOUR - DETERMINING FACTORS

00:00:15

- Skin type classified by the Fitzpatrick scale (Type 1-6)
  - Type 1 → very fair
  - Type 6 → black

Fitzpatrick classification of the skin type					
					
I-Very Fair	**II-Fair**	**III-Medium**	**IV-Olive**	**V-Brown**	**VI-Black**
Always burns, never tans	Usually burns, tans with difficulty	Sometimes burns, sometime tans	Rarely burn, tans easily	Very rarely burns, tans very easily	Never burns, always tans

Types Of Melanin

- Skin colour is determined by
  - Eumelanin: Dark pigment → dark skin type → ↓ skin cancer risk
  - Pheomelanin: Yellow-orange pigment → fair skin type → ↑ skin cancer risk

- Skin colour depends on
  - Type of melanin (eumelanin vs pheomelanin)
  - Number of melanosomes
  - Distribution of melanosomes:
    → In lightly pigmented skin: melanocytes with clusters of 2-3 melanosomes.
    → In darkly pigmented skin: melanocytes with individual melanosomes
  - Not dependent on melanocyte number or epidermal melanin unit (1 melanocyte: 36 keratinocytes)

HYPERPIGMENTATION DISORDERS

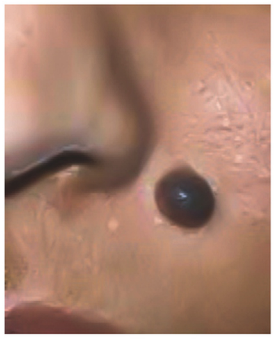
00:02:09

Café-Au-Lait Macules (Calm)

- Hyperpigmented macules
- Asymptomatic
- Present since birth

Yourwish

- Due to ↑ melanosomes
- Border in
  - Neurofibromatosis type 1
    - → Smooth, regular margin: "Coast of California"
  - Other disorders
    - → Irregular margin: "Coast of Maine"
- Associated with
  - Neurofibromatosis
  - Tuberous sclerosis

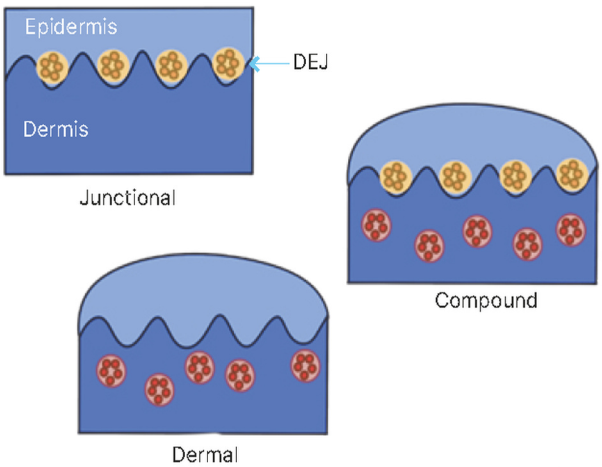


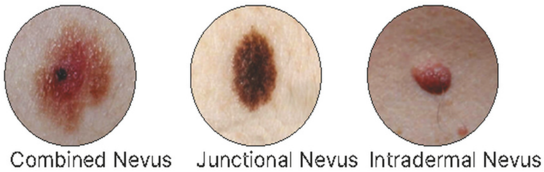
Acquired Melanocytic Nevi (Moles)

- Due to melanocyte proliferation leading to the formation of cell nests

Types

- Junctional nevi
  - Cell nests at the dermoepidermal junction
  - Macule, dark
- Compound nevi
  - Cell nests at junction + dermis
  - Papule, brown
- Dermal nevi
  - Cell nests are found only in the dermis
  - Raised, skin-colored





Malignancy Risk

- Overall risk of malignancy in naevi is low
- Highest risk for malignant transformation → Junctional nevi

Congenital Melanocytic Nevi (Cmn)

- Present since birth
- Single blackish plaque with hypertrichosis + rugosity

Special Type

- Bathing trunk/Garment nevus

Yourwish

- Covers >20 cm of area
- With satellite lesions
- High risk of malignant transformation

Dermal Melanocytic Nevi (Blue Lesions)

- Bluish colour → because of the Tyndall effect

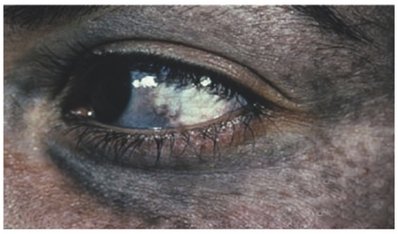
Types

FMGE June 2024

Mongolian Spots

- MC in mongoloid races
- Seen in the sacral area
- Present at birth
- Resolve spontaneously

Nevus Of Ota



- AKA Nevus fuscunucleus opthalmomaxillaris
- Ophthalmic + maxillary division of the 5th cranial nerve
- Unilateral hyperpigmented bluish macules
- Involves sclera also
- Seen in Japanese

Nevus Of Ito

- Similar to the nevus of Ota, but seen on the scapular area

Treatment

- Lasers
  - Alexandrite
  - Ruby
  - Nd: YAG

Melasma

00:09:00

FMGE 2022

- Hyperpigmented, asymptomatic macules on the face
- Predisposing factors:
  - Sun exposure
  - Pregnancy
  - OCP
  - Thyroid disorders
- In pregnancy → Chloasma
- Pathogenesis:
  - Hyperactive melanocytes: Large and more dendritic produce more melanin
- Site
  - Malar
  - Mandibular
  - Centrofacial
- Types

- Epidermal
  - → Brown
  - → **Wood lamp → accentuation**
- Dermal
  - → Bluish
  - → No accentuation on the wood lamp
- Mixed

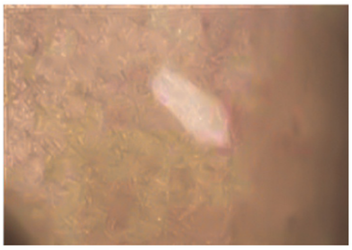
- Treatment
  - Sunscreen
  - Topical: Hydroquinone, Kojic acid, Glycolic acid, arbutin
  - TC cream - Kligman's regimen: Hydroquinone+tretinoin+ mild steroids
  - Oral: Tranexamic acid
  - Procedures: Peels and lasers

HYPOPIGMENTATION DISORDERS

00:11:55

- Depigmentation
  - Complete loss of pigment
- Hypopigmentation
  - Decreased pigment

Nevus Depigmentosus



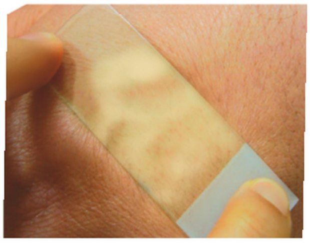
- Hypopigmented macule
- Present since birth
- Stable lesion
- Enlarges in proportion to body weight
- No Wood lamp accentuation

Differentiation From Vitiligo

- Vitiligo is
  - Not present since birth
  - Symmetrical
  - Accentuate the woods lamp

Nevus Anemicus

- Hypopigmented macule
- Not true hypopigmentation
- Hypersensitivity to catecholamines→ Vasoconstriction
- Due to vasoconstriction
- Differentiated from nevus depigmentosus using Diascopy
  - Nevus anemicus:
    - → No change (already blanched)
  - Nevus depigmentosus:
    - → Merges with the surrounding skin.
    - → Because pressure removes the blood supply



Albinism

00:15:17

- Congenital, universal absence of eumelanin
- Affects: Skin, Hair, Eyes

Types


- Ocular albinism: X-linked recessive
- Oculocutaneous albinism (Albinoid): Autosomal recessive
  - Tyrosinase negative: Complete absence of pigmentation
  - Tyrosinase positive: Some pigmentation present
  - ↑ Risk of: Photo damage and Skin cancers

Piebaldism

- Genetics:
  - Autosomal dominant
  - Mutations in the KIT gene (chromosome 14)
- Clinical features
  - Congenital leukoderm: Triangular patch of hypopigmentation with Islands of pigmentation
  - Poliosis: White hair
  - Ventral midline distribution

Syndromes Associated

Waardenburg Syndrome

- Inherited syndrome
- Piebaldism-like lesions
- Lateral displacement of inner canthi and lower lacrimal puncta(Dystopia canthorum) with normal interpupillary distance
- Heterochromia
- Cochlear deafness

Vogt-Koyanagi-Harada Syndrome

- Onset commonly occurs in the third and fourth decades
- Occurs in multiple phases
  - **Phase 1**
    → Meningoencephalitis
  - **Phase 2**
    → Uveitis + choroiditis + optic nueritis; followed by eye damage ,deafness
  - **Phase 3 within 3 months**
    → Usually,y within three months or as the uveitis starts subsiding
    → Poliosis, Leukoderma, Alopecia

Yourwish

Vitiligo

00:20:15

- Autoimmune destruction of melanocytes → Depigmented (chalky white) macules

FMGE 2018, 2021, 2022 INICET 2021, 2023, 2024

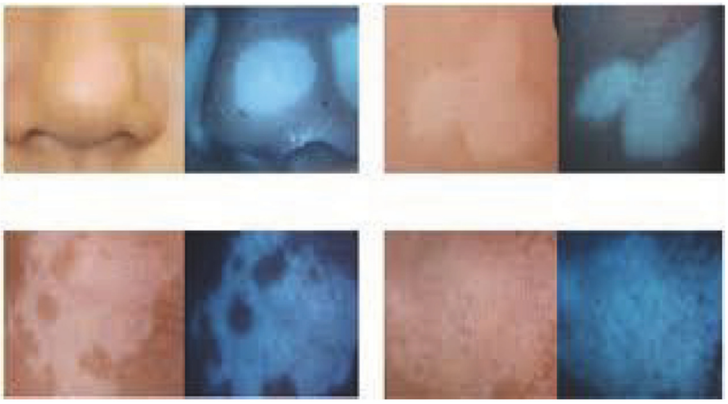
- Associated with
  - Family history (20-30%)
  - Autoimmune diseases
    → Especially Hashimoto thyroiditis
- Clinical features
  - Asymptomatic
  - Bilaterally symmetrical (most common) hypopigmented patch
  - May show leukotrichia (white hair)

Pathogenesis

- Genetic factors: Catalse gene
- Autoimmune hypothesis
- Neural hypothesis
- Autotoxic, self-destructive, or free radical hypothesis

Important Signs

- Koebner phenomenon
  - On scratching, lesions develop along the line of trauma
- Wood lamp
  - Accentuation (very white)



Types Of Vitiligo

Vitiligo Vulgaris

- MC type
- Bilateral symmetrical
- Vitiligo shows the Koebner phenomenon
- In the woods, lamp accentuation

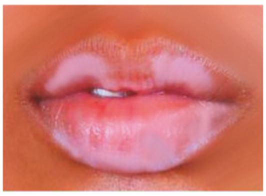
Segmental Vitiligo

- Depigmented macules along a segment
- Early onset
- Relatively stable course
- Frequently associated with leukotrichia

- No Koebner phenomenon
- Poor response to treatment (medical & phototherapy)

Focal Vitiligo

Mucosal Vitiligo



Acrofacial Vitiligo

- Face + distal parts
- Worst prognosis

Vitiligo Universalis

- >80% BSA involved
- Treated by depigmenting the remaining skin using Monobenzyl ether of hydroquinone

Treatment Of Vitiligo

- General: Avoid trauma
- Topical
  - Steroids
  - Calcineurin inhibitors
  - PUVA
- Phototherapy - NB UVB, PUVA, PUVAsol, EXIMER
- **Systemic**
  - Steroids (minipulse)
  - Immunosuppressants:
    - → Cyclophosphamide
    - → Azathioprine
    - → Levamisole
    - → Tofacitinib
- Phototherapy
- Surgical/cosmetic

Chemical Leukoderma

NEET PG 2019

- Depigmentation at the site of chemical contact
- **Examples**
  - **Rubber chappal:** Monobenzyl ether of hydroquinone
  - **Bindi area:** Para-tertiary butyl phenol
  - **Hair dye:** Para-tertiary butyl catechol



PYQ

Q. Which diagnostic tool is used to identify the condition depicted in the image below?

a. Culture
b. Wood's lamp examination
c. Gram staining
d. Patch test

Ans: **(b)** Wood's lamp examination

Q. What is the most probable diagnosis for a young girl who exhibits leukotrichia and lesions as depicted in the image?

a. Focal vitiligo
b. Segmental vitiligo
c. Piebaldism
d. Nevus depigmentosus

Ans: **(c)** Piebaldism

Q. A 40-year-old female who had a history of chronic sun exposure presented to the OPD clinic with brownish pigmentation as shown in the image. Which of the following is the diagnosis?

a. Melasma
b. Freckles
c. Melanoma
d. Basal cell carcinoma

Ans: **(a)** Melasma

LMRP

- Identify - CMN; nevus of Ota, *Mongolian spots*

- Pigmentation on face after sun exposure → *Melasma*
- Piebaldism
  - Triangular patch of depigmentation
  - Islands of pigmentation
  - Poliosis
  - Ventral midian aspect
- Depigmented lesions on the body → *Vitiligo vulgaris*

COMMON ERRORS

- Colour of skin determined by melanocyte → Determined by type of melanin and number & distribution of melanosomes.
- Nevus anemicus vs nevus depigmentosus → *Diascopy*
  - Nevus anemicus → merges with the surrounding skin
  - Nevus depigmentosus → no change
- Nevus depigmentosus vs congenital vitiligo →
  - Congenital vitiligo
    - → Usually not at birth
    - → On Wood's lamp → accentuates
    - → Increase in size

11 ECZEMA

CLASSIFICATION OF ECZEMA

00:00:11

CLASSIFICATION

Exogenous eczemas
- Irritant dermatitis
- Allergic contact dermatitis
- Photodermatitis
- Phytodermatitis

Endogenous eczemas
- Atopic dermatitis
- Pityriasis alba
- Seborrheic dermatitis
- Discoid eczema
- Hand eczema
- Asteatotic eczema
- Gravitational eczema
- Lichen simplex chronicus
- Prurigo nodularis

- Exogenous Eczema: Caused by factors outside the body.
- Endogenous Eczema: Caused by factors inside the body (genetic/immunological).

CLINICAL STAGES OF ECZEMA

- Acute
- Subacute
- Chronic

Parameter	Acute Eczema	Chronic Eczema
Clinical Features	• Severe itching • Oozing (very characteristic) • Vesicles • Erythema • Fissuring • Highly symptomatic 	• Pigmentation changes • Scaling • Crusting • Induration (skin thickening) • Oozing and vesicles minimal or absent 
Histopathology	• Spongiosis (intercellular edema)	• Acanthosis (increased thickness of stratum spinosum)

EXOGENOUS ECZEMA

00:02:52

- It can be
  - Irritant
  - Allergic
  - Photodermatitis
  - Phytodermatitis

Irritant vs. Allergic contact dermatitis

NEET PG 2019, 2023,
AIIMS 2018, INICET 2020

Feature	Irritant Contact Dermatitis (ICD)	Allergic Contact Dermatitis (ACD)
Mechanism	Non-immunological (Direct damage).	Immunological (Type 4 Hypersensitivity).
Onset	First exposure (e.g., acid burn).	Subsequent exposure (Requires sensitization/memory cells).
Spread	Localized to site of contact.	Can spread beyond the site of contact.

Common Allergens And Their Sources

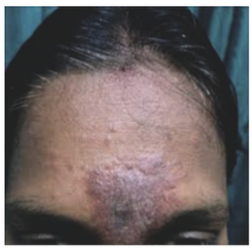
00:05:55

Allergen	Source
Nickel, cobalt	Artificial jewelry, jeans buttons
Chromium	Cement, painting
Potassium dichromate	Leather, detergents, paints
Epoxy resins, phenols	Plastics
Parthenium	Plant dermatitis
Propylene glycol	Cosmetics, medicaments
PPD (Paraphenylene diamine)	Hair dye
Neomycin, gentamycin	Topical medications
Latex/ rubber	Gloves, shoes, belts
PTBP (Paratertiary butyl phenol)	Bindi







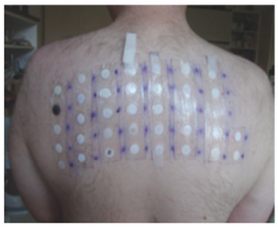


Parthenium Dermatitis


- Most Common Cause in India: Parthenium hysterophorus (aka Congress grass)
- Allergen: Sesquiterpene Lactone.
- Population: Farmers
- Presentation: Airborne Contact Dermatitis.
  - Affects exposed areas: Face, Flexures (cubital/popliteal fossae), Neck
- Treatment: Avoidance, washing, steroids, Azathioprine

Patch Test

AIIMS 2019, 2020



- Used to detect allergen in allergic contact dermatitis.
- Based on Type IV hypersensitivity reaction
  - Principle: Mimics contact dermatitis in controlled setting
- Procedure:
  - Done on back, Applied as patch
  - Chambers contain known allergens
- Reading time:
  - 48 hours
  - 96 hours (best reading)

Photo Patch Test

- Used when allergen becomes active on sun exposure.
- Procedure:
  - Apply allergens in duplicate
  - Cover with opaque material
  - After 48 hours: Irradiate one side with UVA
- Interpretation:
  - Both negative → No allergy
  - Non-irradiated negative, irradiated positive → Pure photo allergy
  - Non-irradiated positive, irradiated negative → Allergy, no photo allergy
  - Both positive → Allergy worsened by sun

Management Of Contact Dermatitis

- Avoid allergen (most important) or Minimize exposure (gloves, etc.)
- Topical steroids
- Oral steroids (severe cases)
- Azathioprine, Cyclosporine
- Do not use Retinoids (increase dryness and worsen condition)

NEET PG 2018, 2019, INICET 2021

ENDOGENOUS ECZEMA

00:17:28

Atopic Dermatitis

- Definition: itchy, chronic or chronically relapsing inflammatory skin condition
- Called: Itch that rashes/ itch is a disease
- History of Atopic Triad: Patients or their family members often have a history of one or more of the following conditions:

1. Atopic Dermatitis
2. Allergic Rhinitis (Hay fever)
3. Asthma

- Pathogenesis:

Epidermal Barrier Dysfunction
- Filaggrin gene impairment
- ↑ Skin pH
- ↓ S. aureus resistance
- ↑ Allergen susceptibility
- ↓ Ceramides
- ↓ Hydration

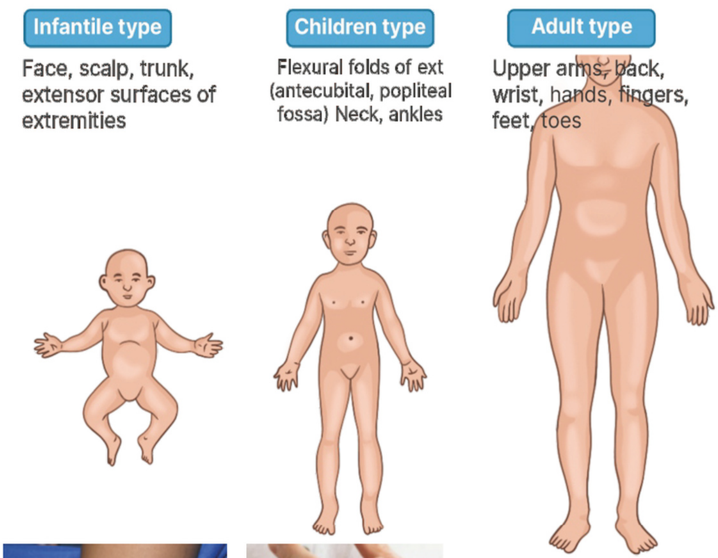
AD
Pathogenesis

Immunological Abnormalities
- Calcineurin-mediated Th2 cell activation
- ↑ TEWL
- ↓ IL-4, IL-13 production
- ↑ Serum IgE
- ↓ PDE-4 activation

Aggravating Factors
- Dry skin
- Harsh soaps, detergents, wool
- Seasonal changes
- Heat
- Sweating
- Infections
- Stress
- Food allergies

Clinical Features

- Typically Presents In 3 Phases:
  - Infantile Phase (3 months - 2 years):
    - → Eczematous patches which itchy and oozy
    - → Face, Scalp, Extensors are predominantly involved
      - Reason: Crawling → extensors exposed
  - Childhood Phase
    - → Typically involves Flexures, Neck, Cubital fossa, Popliteal fossa
  - Adult Phase
    - → Hands & Flexures are involved




Face


Child Flexures

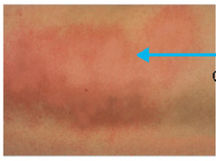

Adult Hands

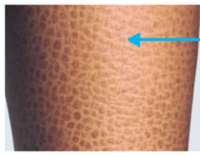
Important Points

- Denny Morgan Fold: Extra fold on lower eyelid

Yourwish

- Other features seen in atopic dermatitis
  - White dermographism
  - Ichthyosis
  - Keratosis pilaris
  - Hyperlinear palms and soles





Diagnosis

- Mainly clinical diagnosis
- Criteria: Hanifin and Rajka Criteria

Hanifin and Rajka Criteria

Four major criteria (any 3 needed)

- Pruritus
- Typical morphology and distribution
  - Facial / Extensor involvement in infant and children
  - Flexural lichenification in adults
- Chronic relapsing course
- Personal or family history of atopy (Asthma, allergic rhinitis, atopic dermatitis)

Treatment Of Atopic Dermatitis

- Remove triggers
- Hydration: Moisturize
- Pharmacological
  - Topical corticosteroids
  - Calcineurin inhibitors (face/genitals)
  - Oral steroids
  - Cyclosporine
  - Azathioprine
- Newer treatments:
  - JAK inhibitors: Tofacitinib, Upadacitinib, Baricitinib
  - Crisaborole (PDE4 inhibitor)
  - Dupilumab (IL-4 receptor alpha antagonist)

Pityriasis Alba

00:28:00

- Present with Asymptomatic, Ill-defined, hypopigmented, scaly macules and patches
- Mostly on face of children and adolescents, atopics
- Histopathology: Spongiosis
- Treatment:
  - Moisturizer
  - Mild topical steroids

Difference From Indeterminate Hansen

Pityriasis Alba	Indeterminate Hansen
Multiple lesions	Single lesion
Mild scaling	No scaling
Episodic	Not episodic
HPE: Spongiosis	HPE: Periappendageal infiltrate
Seen in atopic child	Seen in endemic area

Seborrheic Dermatitis

00:30:00

- Occurs in seborrheic areas: Areas with increased sebaceous gland
- Chronic, inflammatory papulosquamous disease
- Pathogenesis: increased sebum
- Organism: Malassezia overgrowth
- Site
  - Scalp
  - Face
  - Upper trunk
- Occurs in:
  - < 3 months (due to maternal transfer of androgen)
  - Adolescents & adults

Presentation In < 3 Months

- Cradle Cap: Thick greasy scales on scalp

Adult Presentation

- Sites
  - Scalp: Dandruff
  - Nasolabial folds
  - Eyelids
  - Retroauricular area
- Characteristic: Greasy scales

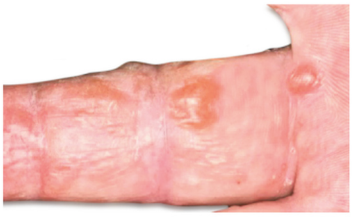
Treatment

- No oil
- Antifungal shampoos (Ketoconazole)
- Azole creams
- Mild topical steroids

Pompholyx (Dyshidrotic Eczema)

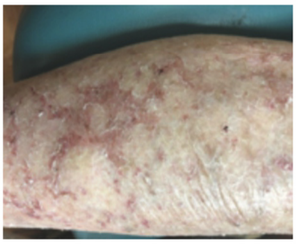
00:34:00

- Presents with Bilateral symmetrical lesions
- Deep seated vesicles on hands and feet
  - Look like sago grains
- Itchy
- Relapsing



Asteatotic Eczema

- Also called: No fat rash, Winter eczema, Eczema craquelé
- Cracked porcelain pattern or Crazy paving pattern or Dried river bed pattern
- Seen in: Elderly, Atopic patients, Winters
- Cause:
  - Loss of lipids/ceramides
  - Very dry cracked skin



Lichenification

00:36:56

- Due to chronic scratching.
- Three features (Mnemonic: SIP):
  - ↑ Skin markings
  - ↑ Induration
  - ↑ Pigmentation
- Seen in: Lichen simplex chronicus (neurodermatitis)
- Histopathology: Acanthosis

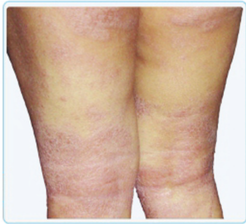
PYQs

00:38:40

Q1. A child presented with itchy plaques over neck, bilateral popliteal and cubital fossae. What could be the diagnosis?

INI CET NOV 2021

A. Atopic dermatitis
B. Dermatitis herpetiformis
C. Pemphigus vegetans
D. Psoriasis



Answer: A

Q2. Which component of cement causes allergic dermatitis among construction workers in the area?

A. Cobalt
B. Nickel
C. Iron
D. Chromate

Answer: D

Q3. When should you schedule the removal of a patch test for an eight year old boy who has previously been diagnosed with allergic contact dermatitis?

A. 24 hours

Yourwish

B. 48 hours
C. 72 hours
D. 96 hours

Answer: D

Q4. A 30 year old individual presents with itchy, painful vesicles on palms and lateral aspects of fingers. They are small, clear and resemble sago grain. It is triggered by sweating or warm weather. Which is responsible for this condition?

A. Atopic Dermatitis
B. Pompholyx Eczema
C. Psoriasis
D. Allergic Contact Dermatitis

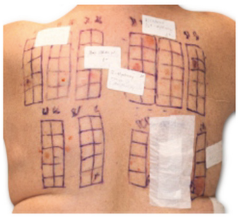
Answer: B

Q5. A child is a known case of asthma well controlled on medication. He came to the OPD and the physician noticed an important clinical sign. What is it?

A. Dennie Morgan fold
B. Hertoghe's sign
C. Keratoconus
D. Keratosis Pilaris

Answer: A

Q6. Test shown in the image is an example for?



A. Type 1 Hypersensitivity
B. Type 2 Hypersensitivity
C. Type 3 Hypersensitivity
D. Type 4 Hypersensitivity

Answer: D

Q7. Topical steroids are most effective in
A. Dermal atrophy
B. Eczematous dermatitis
C. Bullous lesions due to HSV
D. Rosacea

Answer: B

LAST MINUTE REVISION POINTS

00:41:13

- Important allergens
  - Nickel, artificial jewelry, METALS
  - Chromates, cement

Yourwish

- PPD in hair dye
- PTBP in bindi
- Patch Test
  - Used to diagnose Allergic Contact Dermatitis.
  - Type IV hypersensitivity reaction
  - Applied on the back
  - Readings are taken at 48 hours and 96 hours.
- Atopic Triad: Personal or family history of:
  1. Atopic dermatitis
  2. Allergic rhinitis (hay fever)
  3. Asthma
- Denny-Morgan fold: Infraorbital skin fold seen in atopic dermatitis.
- Hanifin and Rajka Criteria (for Atopic Dermatitis)
  - Used for clinical diagnosis of atopic dermatitis.
- Pompholyx (Dyshidrotic Eczema)
  - Deep-seated vesicles resembling sago grains
  - Commonly seen on hands and feet, especially fingers.
- Lichenification: Triad remembered by Mnemonic: SIP
  - S - Increased Skin markings
  - I - Induration
  - P - Pigmentation

COMMON ERRORS

00:43:38

- Irritant vs Allergic Contact Dermatitis

Irritant Contact Dermatitis	Allergic Contact Dermatitis
Occurs on first exposure	Occurs on subsequent exposure
Non-immunological	Type IV hypersensitivity reaction
Restricted to area of contact	Can spread beyond area of contact

- Patch test reading: 48 & 96 hrs (best)
- Dermographism
  - Red dermographism → seen in physical urticaria
  - White dermographism → seen in atopic dermatitis
  - Black dermographism → seen with metals
- Pityriasis Alba vs Indeterminate Hansen

Pityriasis Alba	Indeterminate Hansen
Multiple lesions	Usually solitary lesion
Fine scaling present	No scaling
Seen in atopic individuals	Seen in endemic areas
Histology: Spongiosis	Histology: Peri-appendageal infiltrate

- Nummular Eczema
  - Also called Discoid eczema
  - Characterized by coin-shaped / circular eczematous lesions.

12 PARASITIC INFESTATIONS

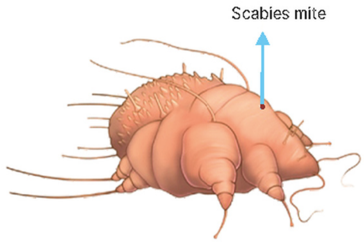
SCABIES

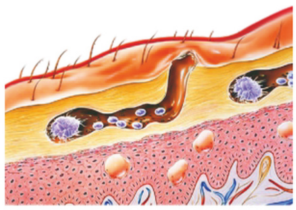
00:00:11

INICET MAY 2025, FMGE DEC 2021

FMGE JUNE 2024 PART 2

- Organism is Sarcoptes scabiei (variety hominis)
- Type of mite transmitted by fomites
- The female mite causes the infection





Predisposing Factors

- Overcrowding
- Lack of sunlight

Pathogenesis

- 10-12 mites cause infections

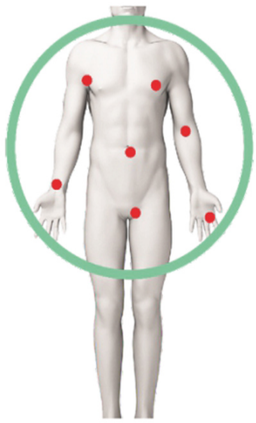
Female mite lays eggs in stratum corneum or stratum

↓

Forms a tract (burrow) at the end of which it lays eggs

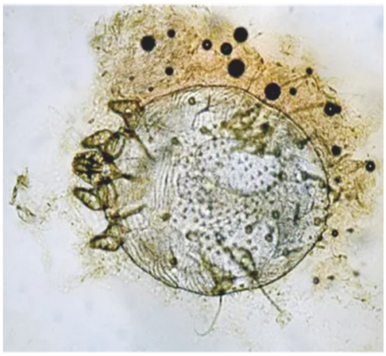
Clinical Features

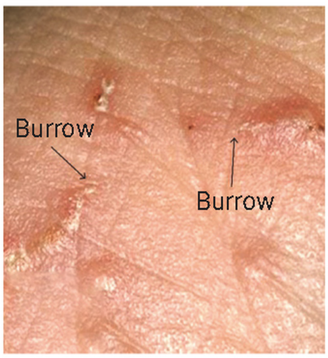
- Incubation period → 2-4 weeks
- Nocturnal itching
- Family members are also affected
- Pt presents with itchy excoriated papules on a particular distribution of the body → circle of hebra
  - Interwebbed spaces
  - Elbows
  - Axilla
  - Umbilical area
  - Groin area
  - Nipple area
- Face is not affected as sebum kills the mite
- In infants face is affected



Special Lesion

- Called a burrow
- Linear, wavy, thready lesion
- Commonly seen in interwebbed spaces
- Usually present
  - Stratum corneum
  - Can go too stratum malphigian





Diagnosis
- Wet mount can be prepared
- Clinical history with typical feature

Treatment
General Measures
- Treat all family members irrespective of symptoms
- Treatment of linen and clothing
- Repeat treatment after 1 week
  - Kills the eggs also

Drugs Used
Topical Agents
- 5% permethrin- TOC
  - Blocks sodium-gated channels
- 1% GBHC (cheaper)
  - Not to be used in pregnant patients, Children less than 6 years, & Neurological disorders
- 25% benzyl benzoate
- Malathion
- Crotamiton
- Precipitated sulphur- TOC in less than 2 M infants

ORAL
- Ivermectin- Blocks chloride-gated channels

Crusted Scabies/norwegian Scabies
00:07:35

- Crusts are formed
- Typically seen in
  - Neurological impairment
  - Down syndrome
  - Leprosy
- Millions of mites are present
- The most severe form of scabies
- Oral + topical agents are given

Atypical Scabies
00:08:50

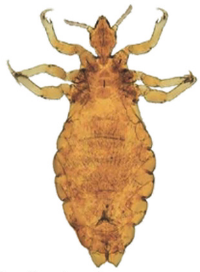
- Infantile scabies
  - Face is affected
  - Vesicles and bulla formes
- Animal scabies
  - No burrows are formed
  - Human transmission possible
- Genital scabies
  - Sexually transmitted
- Nodular scabies
  - Seen in the axilla, groin

Yourwish

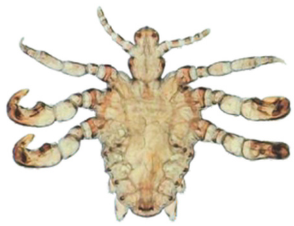
PEDICULOSIS

00:09:41

- Capitis- Scalp infections (P. humanus capitis)
- Corporis- body (P. humanis corporis)
- Crurus- groins
- Pubis- pubic hair (Pthirus pubis)
- Ptiyrus pubis is
  - Stouter
  - Claw-like hands present



Pediculus humanus



Phthiriasis pubis

Pediculosis Capitis

- Seen in scalp/lice
- Seen in school-going girls mostly
- Lays eggs
- Empty egg shells called nits can be seen
- Extreme itchiness present
  - Super added infection d/t constant itching causes recurrent folliculitis

Clinical Presentation

Extreme itchiness present
↓
Superadded bacterial infection
↓
Crusting
↓
Matting of hair (Plica polonica)

Pediculosis Corporis/vagabond's Disease

- Usually seen in destitutes/homeless
  - Parasite present in seams of clothing
- Itchy lesions are seen on the body

Morbus Errorum

- The lesions left behind after the parasite takes a bloody meal

Pubiculosis Pubis

- AKA pubic lice
- Pubic hair, eyelashes, and axilla affected
- Itchy lesions present
  - Heal with hyperpigmentation giving violaceous hue called maculae cerulae

Treatment

- 1% permethrin
  - Cream formation available
- Systemic ivermectin
- Ivermectin shampoo used
- Cotrimaxazole
  - Can be used i/c/o superlative bacterial infection

PYQS

00:16:03

Q. A 45-year-old homeless man presents to the clinic with multiple crusted and ulcerated skin lesions on his face, scalp, and extremities. The lesions are accompanied by intense itching and a foul odor. On examination, you notice the presence of lice infestation and signs of poor personal hygiene. The patient reports a history of living on the streets for several years and limited access to proper sanitation facilities. Based on the clinical presentation, what is the most likely diagnosis?

a. Pediculosis pubis

b. Scabies

c. Tungiasis

d. Vagabond disease

Ans. **d.** Vagabond disease

Q. A 12-year-old boy presents with a complaint of recurrent folliculitis on the scalp.
The folliculitis is characterized by the presence of small, red, tender papules and pustules with surrounding erythema. On further examination, head lice infestation is detected. Which of the following is the most likely mechanism by which head lice infestation can lead to recurrent folliculitis?

a. Direct infection from head lice

b. Allergic reaction to head lice saliva

c. Secondary bacterial infection due to scratching

d. Obstruction of hair follicles by head lice eggs (nits)

Ans: **c. Secondary bacterial infection due to scratching**

Q. In scabies, where do the burrows created by Sarcoptes scabiei mites primarily occur?

a. A

b. B

c. C

d. D

Ans. **a.**

- It primarily occurs in the stratum corneum

INICET MAY 2025

Q. Which of the following treatments are appropriate for scabies in infants?

a. 5% Permethrin cream

b. 10% Crotamitron

c. Ivermectin

d. 25% Benzyl benzoate lotion

A. a,b,c

B. a,b,d

C. a,c,d

D. b,c,d

Ans. B. a,b,d

Q. What could be the potential diagnosis for a 7-year-old boy with intellectual disability who has developed extensive warty crusts on the trunk, hands, and feet, along with severe fissuring and scaling on the soles of his feet?

FMGE DEC 2021

a. Scabies incognito
b. Animal scabies
c. Nodular scabies
d. Norwegian scabies

Ans: d. Norwegian scabies

LAST MINUTE REVISION POINTS

00:18:23

- Burrows seen in → scabies
- Circle of hebra → distribution of lesions in scabies
- TOC scabies → 5% permectin
- Oral drug for scabies → Ivermectin
- Crusted scabies → neurological disorders
- Cause of recurrent folliculitis in school girls → P. capitis
- Morbus errorum seen in → P. corporis
- Macula cerulea seen in → P.pubis

COMMON ERRORS

00:19:15

- Burrow level
  - Present in the stratum corneum can extend to the stratum malphigi
- Morbus errorum → P.corporis
- maculae ceruleae → P.pubis
- Percentage of permethrin used
  - 1%- pediculitis
  - 5%- scabies

SCABIES	ATOPIC DERMATITIS
• Night itching • Family history itching present	• IgE present • Relapsing remitting type • Atopic triad present

Yourwish

13 ADVERSE DRUG REACTIONS

FIXED DRUG ERUPTION

00.00.12

- Fixed drug causing lesions at a fixed spot
- Type IV hypersensitivity reaction
- Due to the presence of memory T cells
- Clinical presentation
  - Circular lesion
  - Erythematous plaque which shows ulceration/vesiculation at the centre
  - Violaceous plaques with erythematous border
  - Lesions heal with intense hyperpigmentation
  - Also present on the lips and body
- Drugs caused are → NSAIDs, Cotrimoxazole, Fluoroquinolones

STEVEN JOHNSON SYNDROME / TOXIC EPIDERMAL NECROLYSIS

00.03.00

- SJS → <10% BSA involved
- SJS-TEN overlap → 10-30% BSA
- TEN → >30% BSA involved
- Most severe cutaneous drug reaction
- A/K/A SCAR (Severe cutaneous adverse drug reaction)
- TEN is a/k/a Lyell's disease
- Clinical presentation:
  - Skin
  - Mucosa → >= 2 mucosal site is involved → presence of crusting
  - Systemic → circulatory collapse, shock, septicemia

Pathology

H/O drug intake

↓

Prodrome symptoms like fever, malaise

↓

Purpuric lesions on trunks, limbs

↓

Targetoid lesion(2/3 zones presents) on hands and feet

↓

Sheets of erythema

↓

Skin peeling

↓

Hyperthermia, circulatory collapse, and infection

Prognosis

- SCORTEN →predicts mortality

Scorten parameters	Score
Age (years)	1
Malignancy	1
Tachycardia	1
Initial surface of epidermal detachment	1
Serum urea	1
Serum glucose	1
Serum bicarbonate	1
Scorten score	**Predicted mortality (%)**
0-1	3.2
2	12.1
3	35.8
4	58.3
≥5	90

- Treatment - ICU setting
  - Fluid management
  - Temperature monitoring

DRUG INDUCED PIGMENTATION

00.07.55

Drugs	Used for	Clinical presentation
Minocycline	Acne	• Deposition of Iron chelates →Black blue pigmentation • Lupus-like reaction 
Hydroquinone	Melasma	• Inhibits → Homogentisic acid oxidase → Deposition of ochre bodies in skin →Ochronosis • Deep violaceous pigments on the face 

HCQs	Rheumatoid arthritis	• Bluish pigmentation • Pigmentation present over the shin and face	
Bleomycin	Anticancer drugs	• Flagellate pigmentation and erythema	
Zidovudine	HIV	• Pigmentation of nails • Pigmentation on Hands / Skin creases	 
Clofazamine	Leprosy	• Orangish pigmentation • Ichthyosis	
Amiodarone	Ventricular tachycardia	• Hyperpigmentation on photoexposed areas	 

PYQs

00.11.27

Q.What is the usual cause of a condition characterized by blistering and peeling of more than 30% of the body's surface area?

a.Viral infections

b.Drugs

c.Fungal infections

d.Autoimmunity

Ans. b.Drugs

Q. What could be the probable diagnosis for a patient who has developed a rash in the same location after taking NSAIDs for knee pain, when he had previously experienced the same rash in the same location after using the same medication for back pain 6 months ago?

a.Drug hypersensitivity

b. Post-inflammatory hyperpigmentation

c.Fixed drug eruption

d. Drug-induced hypermelanosis

Ans. c.Fixed drug eruption

LAST MINUTE REVISION POINTS

00.12.10

- Fixed drug eruption
  - Same drug, same site, and heals with hyperpigmentation
- Blistering of the skin after drug intake
  - SJS - <10% BSA
  - TEN - >30% BSA
- Bluish pigmentation on acne scars after acne treatment → Minocycline

14 SKIN TUMOURS

BENIGN SKIN TUMORS

Skin Tags

00:00:14

- Soft,pedunculated skin colored growths seen in axilla, neck, groin
- Commonly seen in acanthosis nigricans

Syringoma

00:01:12

- Origin: Acrosyringium of eccrine sweat glands
- Site: Periorbital areas

Clinical Features

- Shiny looking vesicles
- Angular borders and grouped
- Translucent, watery secretion

HPE

- Tadpole/comma shaped cells

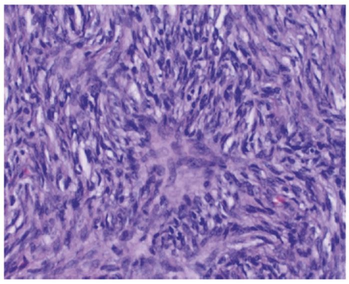
Dermatofibroma

00:02:29

- Benign fibrous histiocytoma'
- Solitary, hyperpigmented, round to oval or targetoid papule, plaque or nodule
- Usually on lower legs
- Clinical Sign:
  - Dimple sign positive (central depression forms upon lateral squeezing).

HPE

- Storiform, cartwheel or whorled pattern
- Spindle cells with elongated nuclein radiating from a centre point
- Seen in
  - Dermatofibroma
  - Dermatofibromasarcoma protuberans



Yourwish

SKIN CANCERS

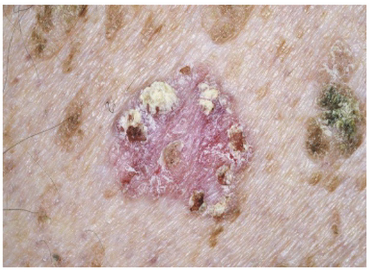
00:03:40

- Consists of
  - Melanoma
  - Non melanoma
    - → Squamous cell carcinoma
    - → Basal cell carcinoma

Non-Melanoma Skin Cancers

SCC & Its Precursors

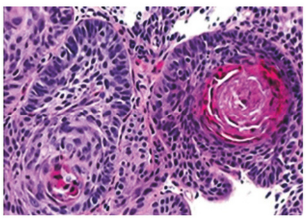
- Precursors: lesion on which SCC can develop

<table>
<tr><td>ACTINIC KERATOSIS</td><td>• Photoexposed part of the body
• Lower lip
• Papules/plaques with rough scaly surface
• Adherent yellowish crust with Pin point bleeding points
 </td></tr>
<tr><td>BOWEN'S DISEASE</td><td>• Intraepidermal SCC(in situ)
• Affects white population, elderly, UV exposure
• Small potential for invasive malignancy
 
CLINICAL FEATURES
• Lower legs of elderly females
• Adherent crust, no bleeding points</td></tr>
</table>

SCC

00:06:35

- Malignant tumor arising from epidermal keratinocytes or its appendages
- 2nd most common skin tumor (1st BCC)
- MC in immunocompromised patients
- Low rate of local, regional and distant spread

Yourwish

Clinical Features

- Non healing papule plaque nodule on sun exposed areas
- Lesion shows crusting

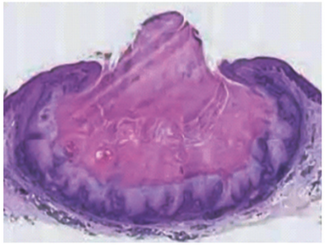
HPE

- Keratin pearls -diagnostic
  - Malignant keratinocytes

Keratoacanthoma

00:08:16

- Recently been classified as Well differentiated SCC
- Site: face>hands
- 3 phases
  - Growth
  - Maturation
  - Resolution
- Appearance
  - Dome shaped nodule with a central crater
  - Our lip splits and merges with normal skin on maturation
  - Self resolving
- HPE
  - Epidermal lipping
  - Central crusted area



Basal Cell Carcinoma

00:09:53

FMGE 2025
INI CET 2023

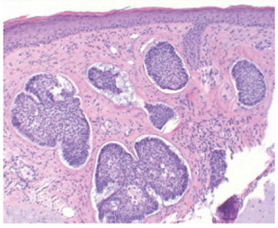
- A/k/a rodent ulcer or basilonioma
- MC human cancer
- Slow growing
- Locally invasive tumor
- Rarely metastasize
- It arises from pluripotent cells within basal cell of epidermis or follicular structures

Clinical Features

- Common sites
  - Along medial canthus
  - Ala of nose
  - Medial aspect of cheeks
- Papules grows into nodules then ulcerates
  - Thready margins
  - Telangiectasia
  - Bleeds to touch

HPE

- Small islands /lobules of malignant basaloid cells with peripheral palisading



Treatment

- Medical: low risk superficial and small nodular BCC
- Imiquimod ,5 FU
- PDT
- Intralesional interferon a-2b
- Hedgehog pathway inhibitors: vismodegib
- Surgical

Malignant Melanoma

00:12:30

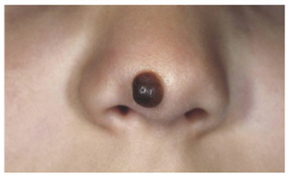
FMGE 2021, 2023
INI CET 2025
NEET PG 2023

- A malignant tumour arising from melanocytes
- Metastasis seen

Predisposing Factors

- Precursor lesions
- UV radiation(controversial)
- Genetics: cyclin dependent kinase (CDK) inhibitor 2A gene (CDKN2A)

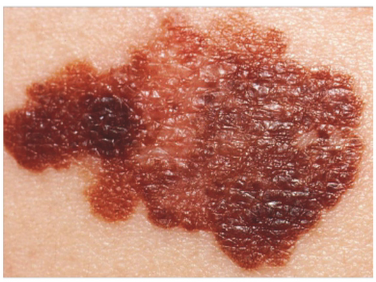
Precursor Lesions

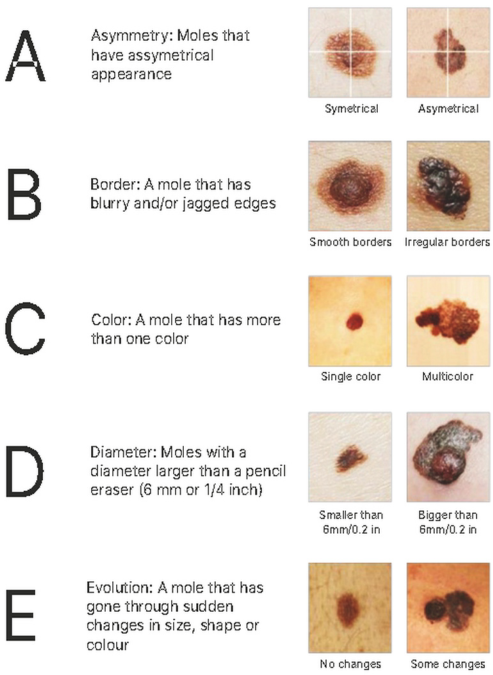


- Congenital melanocytic nevi(CMN)
    - >20cm
    - Located on trunk
    - Present with satellites lesions
- Common nevi
    - Low risk of transmission
- Junctional nevi
    - Highest malignant transformation rate
- Atypical/dysplastic nevi on Histopathology

Diagnosis

- ABCDE rules
    - Pigmented lesions
    - Asymmetrical appearance
    - Border of plaque blurry
    - Multiple colour
    - Diameter>6mm

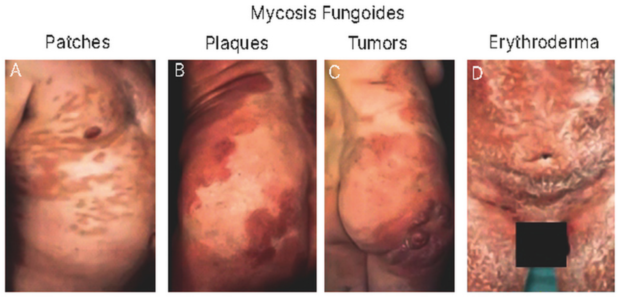




Mycosis Fungoides

00:15:35

- Tumour T cell in skin
- MC variant of primary CTCL
  - Cutaneous T cell lymphoma
- High risk of metastasis
- Present in trunk or central girdle
- Different phases
  - Patches
    - → Hypepigmented
    - → Erythematous
    - → Slightly scaly
  - Plaques
  - Nodules
  - Erythroderma
    - → Involves the whole body

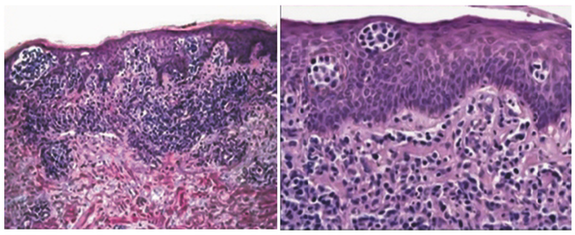


Sezary Syndrome

- A leukemic variant of CTCL.
- Diagnosis requires a Triad:
  1. Erythroderma.
  2. Peripheral Lymphadenopathy.
  3. Sezary Cells in blood smear (Atypical mononuclear cells comprising of >20% of lymphocyte count or a total of Sezary count >1000 cells/ cumm)
- Sezary cells have a cerebriform (brain-like) / convoluted appearance

Mycosis Fungoides - Hpe

- Accumulation of T cells in epidermis → Epidermotropism
- Pautrier's microabscess seen



Treatment Of Mycosis Fungoides

- Total skin electron beam therapy
- Newer drugs
  - Denileukin difitox
  - DAB389-IL2 (fusion toxin histone deacetylase inhibitors

PYQ

00:19:11

Q. A 60-year-old person presented with an ulcer on the medial canthus. The ulcer has rolled-out, beaded margins. Histopathology shows nesting cells with peripheral palisading patters. What is the most likely diagnosis?

FMGE Jan 2025

a. Squamous Cell Carcinoma (SCC)

b. Nevus

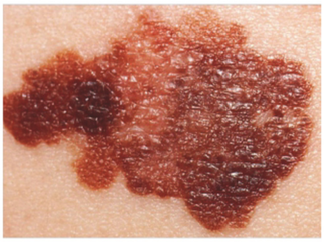
c. Basal Cell Carcinoma (BCC)

d. Melanoma

Ans: c

Yourwish

Q. Which of the following is associated with the clinical condition shown in the image? NEET PG 2023



a. Condylomata lata

b. Male

c. Malignant melanoma

d. Basal cell carcinoma

Ans: c

Q. What is the most common site of melanoma in the Indian population?

a. Trunk

b. Hands and feet

c. Genitals

d. Face

Ans: b

Q. A 65-year-old male presents with a rapidly growing, dome-shaped and centrally ulcerated nodule on the sun-exposed area of his face and he does not report any pain or tenderness. The lesion has been enlarging over the past 4 weeks. A central keratin plug is observed within the crater-like ulcer. There is no regional Lymphadenopathy. What is the most likely diagnosis based on the clinical presentation?

a. Squamous Cell carcinoma

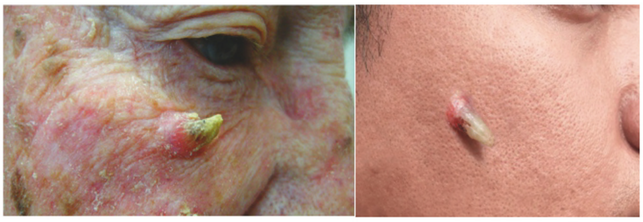
b. Melanoma

c. Keratoacanthoma

d. Basal cell carcinoma

Ans: c

Q. Which type of skin cancer is commonly associated with the depicted cutaneous horn in the image?



a, Squamous cell carcinoma

b. Melanoma

c. BCC

d. Actinic Keratosis

Ans: a

LAST MINUTE REVISON POINTS

00:21:34

- Precursors of SCC
  - Actrinic keratosis
  - Bowen's disease
  - Cutaneous horn
- Keratin pearls is seen in SCC
- BCC
  - Medial canthus
  - Thready margins, beaded and rolled out
  - Telangiectasis

Yourwish

- Bleeds to touch
- Pautrier's, microabscess seen in Mycosis fungoide

COMMON ERRORS

00:22:35

Kearatocanthoma V/S Molluscam Contagiousum

Kearatocanthoma	Molluscam Contagiousum
• SCC • Large dome shaped ulcer with central crater having necrotic material • Epidermal lipping on HPE	• Central umbilication • HPE-handerson patterson bodies

- Precursors of SCC
  - Actrinic keratosis
  - Bowen's disease
  - Cutaneous horn

15 GENODERMATOSES

- Skin conditions affected by genes

NEUROFIBROMATOSIS

00:00:25

- AKA von Recklinghausen disease
- Inheritance: Autosomal dominant condition
- Gene defect-chromosome 17

Clinical Features

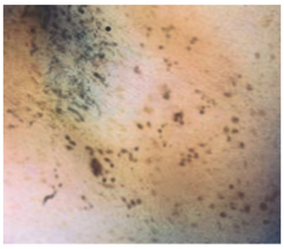
- Cafe au lait macules
  - >6 in number
  - Prepubertal >5 mm
  - postpubertal>16 mm
- Axillary or inguinal freckling
- Fibromas (neurofibromas 2 or more) or plexiform neurofibroma (along the nerve)
- Eye hamartoma (lisch nodules)
- Skeletal abnormalities, e.g., sphenoid wing dysplasia, leg bowing
- CNS features like
  - Epilepsy
  - Low intelligence
- Malignancies
  - Gliomas
  - Astrocytomas

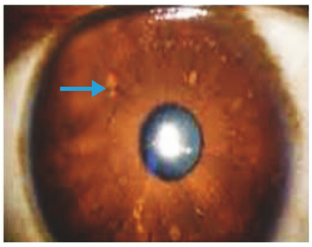
DIAGNOSIS

- A diagnosis of NFl can be made in an individual with 2 or more of the following:
  - ≥6 café au lait macules (>5 mm in greatest dimension for prepubertal persons and >15 mm in greatest dimension for postpubertal persons)
  - Axillary or inguinal freckles
  - ≥2 neurofibromas (any type) or 1 plexiform neurofibroma Optic glioma
  - ≥2 Lisch nodules
  - Sphenoid dysplasia, tibial pseudoarthrosis, or other distinctive bone lesion
  - First-degree relative with a diagnosis of NFI

- **Neurofibromas**
  - Soft tumors on the skin
  - Asymptomatic
  - On pressing feels like a button hole(button hole sign)


Cafe au lait macules


Crowe's sign
(Axillary freckling


Lisch nodules
(Eye hamartomas)

TUBEROUS SCLEROSIS COMPLEX

00:03:46

- AKA Bourneville's disease/Epiloia
- Autosomal dominant inheritance
- Gene defect- Chromosome 9,16

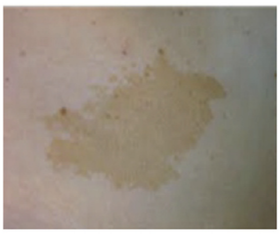
CLINICAL FEATURES

- Low intelligence
- Epilepsy
- Adenoma sebaceum
  - Cutaneous angiofibromas on the skin
  - Soft, red papules
  - Present on nasolabial chins, folds
  - Stats at 4 years of age &increases during puberty

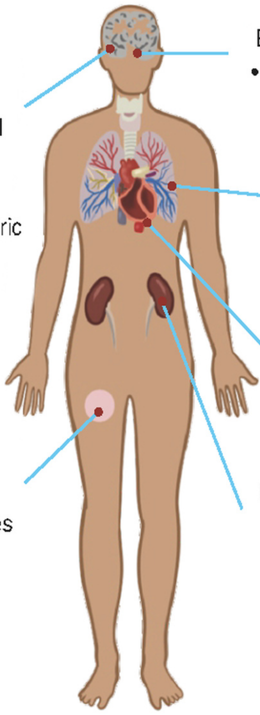
- Hamartomas (present all over the body)
- Ash leaf spot
  - Present on the body, trunk, and limbs
  - A leaf-shaped hypopigmented spot is present

- Rhabdomyoma
- Tubers
- Optic hamartomas(phakomas)
- Mitral regurgitation
- Astrocytomas
- Seizures
- Koenen's tumor
  - Periungual fibromas

- Shagreen patch /collagenoma
  - Appears leathery
- Cafe au lait spots seen
- Confetti-like growth on the skin
- Dental pits
- Gingival hyperplasia seen



Yourwish



Peutz Jeghers

00:08:18

- Autosomal dominant condition
- STK-1 gene is affected
- Early in life

Clinical Features

- Periorofacial lentigenosis
  - Appear early in life
  - A/W gastric adenomas and polyps
  - Carcinogenic risk

XERODERMA PIGMENTOSA

00:09:40

- Dry looking skin + pigmentation over face
- Defect in the nucleotide excision repair gene- NER gene
- Autosomal recessive gene
- The child is born normally

Clinical Features

- Photosensitivity
- Persistent erythema
- Acute sunburn
- Xerosis
- Diffuse freckling
- Telangiectasis
- Atrophic lesions

- Oculocutaneous pigmentation
- Prone to early neoplasia

MALIGNANCY
- Benign- keratocanthoma, AK
- Malignant- BCC, SCC, malignant melanoma

Ocular Manifestations
- Photophobia
- Conjunctivitis

Neurological
- Mental retardation
- Low intelligence

Systemic Malignancy
- Medulloblastoma
- Astrocytoma
- Organ malignancy

EPIDERMOLYSIS BULLOSA

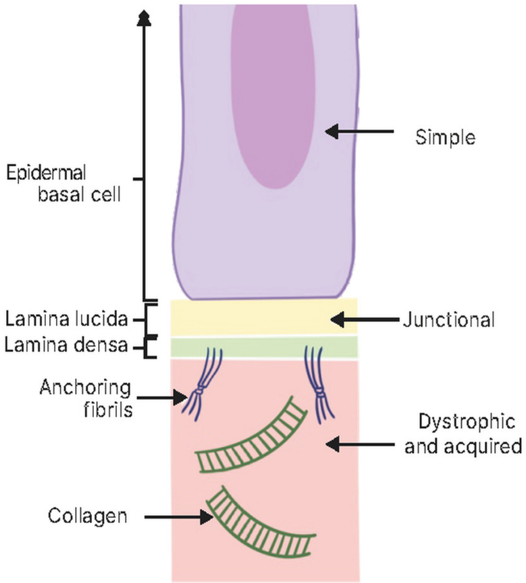
00:12:07

- Lysis of epidermis → bulla formation
- AKA Mechanobullous disorder
  - Mechanical force/trauma leads to the formation of a bulla in the skin

TYPES
Acquired
- EB aquisita- D/t antibodies against collagen 7

Congenital
- Defect in the structure of the skin
- Based on the location of the defect, EB is divided
  - EB SIMPLEX
  - EB JUNCTIONALIS
  - EB DYSTROPHICANS

	EBS	EBJ	EBD
DEFECT	KRT 5, and 14	Laminin 5	Collagen VII
SPLIT	Intradermal	Subepidermal	Subepidermal
INHERITENCE	AD	AR	AD/AR



Levels of blister formation in epidermolysis bullosa at the dermo - epidermal junction.

CLINICAL PRESENTATION

- Positive family history
- Patient bought by parents with splitting /blistering of skin on minor trauma

DIAGNOSE

- Electronmicrospy

TREATMENT

- Gene therapy

INHERITED ACANTHOLYTIC DISORDERS

00:16:05

- Separation of cells in the epidermis
- 2 disorders
  - Darler's disease
  - Hailey-hailey disease

FEATURE	DARLER'S DISEASE	HAILEY-HAILEY DISEASE
Inheritence	Autosomal dominant	Autosomal dominant
Defect	Ca^{2+} ATPase	Ca^{2+} ATPase
Gene	ATP 2A2	ATP2C1
Site	Seborrheic areas	Intertriginous areas(skin folds) like the axilla, groin, and inframammary folds
Lesion	Verrucous, warty, greasy lesions, sandpaper feel	Recurrent, flaccid, vesicular (may rupture, causing erosions)
Histology	Acantholysis, dyskeratosis with corps ronds, corps grains	Acantholysis, dyskeratosis with a dilapidated brick wall appearance

Darier's Disease

- Rough hyperkeratotic papules
- Present in seborrheic areas
- Sandpaper feels
- Longitudinal bands on nails -erythroleuconychia
  - Alternate red and white bands

Hailey Hailey Disease

- Familial benign chronic pemphigus
- Recurrent vesicular eruption
- Intertriginous areas
- Maoeration
- Exacerbations and remissions
- Chronic course
- No mucosa involved
- **Biopsy**
  - Suprabasal acantholysis
  - Dilapidated brick wall appearance

ICTHYOSIS

00:20:19

- Disorder of keratinization
- Present with dry and rough skin
- Uniform persisting scaling
- Congenital and acquired types

CONGENITAL V/S ACQUIRED

CONGENITAL	ACQUIRED
• Icthyosis vulgaris • X linked icthyosis • Lamellar ichthyosis	• Infections(leprosy) • drugs(clofazamine) • malignancies(lymphomas) • Nutritional • Hypothyroidism • Systemic diseases(sarcoidosis)

Different Types Of Congenital Icthyosis

	ICTHYOSIS VULGARIS	ICTHYOSIS RECESSIVE	LAMELLAR ICTHYOSIS
Inheritence	AD	XLR (males manifest)	AR
Defect	Fillagrin	Steroid sulfatase	Transglutaminase
Onset	After 3 Months	Not at birth	At birth
Type Of Scale	Fine, grey, upturned at edges	Dirty-looking adherent	Fish/Plate-like scales

Area Affected	Extensors, Winter exacerbation	Flexural, Preauricular palm, and soles spared	Eythroderma Lower legs
Assosciations	Atopy, KP, PP Hyperlinearity	Comma-Shaped Corneal Opacities Cryptochidism	Colloidoin baby, Ectropion, Eclabion
Treatment	Keratolytics No retinoids	Keratolytics Retinoids Liarozole	Keratolytics Retinoids
			 Colloidoin baby 

INCONTINENTIA PIGMENTI

00:25:06

- AKA Bloch-Sulzberger syndrome
- Inheritance XLD (males die in utero)
- Gene defect-NEMO gene

Clinical Features

- All the lesions are present across the Blaschko line
- Vesicular lesion → Verrucous lesions → hyperpigmented lesions


0- 2 weeks persists for 2 months


2 weeks-6 weeks


12-16 weeks

PYQS

00:26:48

Q. A 6-month-old female infant is brought to the pediatric clinic by her parents due to a skin rash that developed shortly after birth. The parents report that the rash initially appeared as erythematous papules that evolved into vesicles and pustules. Over time, the lesions healed and left behind streaks of hyperpigmentation. Which of the following gene defects is most likely associated with the condition?

A. NF1 gene mutation
B. TP63 gene mutation
C. NEMO gene mutation
D. BRAF gene mutation

Answer: **C**

Yourwish

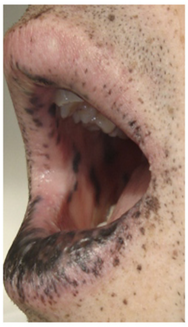
Q. A 7-year-old child presents with numerous pigmented freckle-like spots on the face, neck, and other sun-exposed areas of the skin. The child's parents report that the skin lesions appeared after minimal sun exposure and are concerned about the child's skin health. Based on the provided image and clinical presentation, which of the following rare genetic conditions is most likely to be associated with the depicted skin findings?

A. Albinism
B. Vitiligo
C. Xeroderma Pigmentosum
D. Rothmund-Thomson Syndrome

Answer: **C**

Q. A 25-year-old female presents to the gastroenterologist with complaints of recurrent episodes of abdominal pain and intestinal obstruction. During the examination, the gastroenterologist notices the presence of pigmented spots on her lips, buccal mucosa, and the perioral region. The patient reports a family history of similar features in her father and sister. She also mentions that her father had a history of colon polyps. Based on these findings, which of the following genetic predispositions is most likely associated with the patient's condition?

A. Familial Adenomatous Polyposis (FAP)
B. Peutz-Jeghers Syndrome (PJS)
C. Hereditary Non-Polyposis Colorectal Cancer (HNPCC)
D. Gardner symptoms



Answer: **B**

Q. A 7-year-old child presents with a history of seizures, developmental delay, and multiple skin lesions. On physical examination, the child has hypopigmented macules on the trunk, raised lesions on the face, and Shagreen patches on the back. Which of the following skin findings is typically associated with this condition?

A. Café-au-lait macules
B. Angiofibromas
C. Spider angiomas
D. Erythematous papules with central dell

Answer: **B**

Q. What type of ichthyosis is most likely associated in a 15-year-old male with severe dryness, large, dark, plate-like scales on the skin, present since birth, and genetic testing confirms an autosomal recessive inheritance pattern?

A. Ichthyosis vulgaris
B. X-Linked Ichthyosis
C. Lamellar Ichthyosis
D. Harlequin Ichthyosis

Answer: **C**

LAST MINUTE REVISION POINTS

00:30:03

- NF1- Chromosome 17, AD, CAFES
- Tuberous sclerosis- Epiloid, Chromosome 9/16, AD, Hamartomas
- Periorificial lentiginosis- Peutz-Jegher syndrome
- Epidermolysis bullosa simplex- Mechanobullous, Family h/o, blistering on minor trauma
- Dilapidate brick wall appearance- Hailey Hailey disease
- Verrucous lesions in a female child along Blaschko's lines- Incontinentia pigmenti
- Gene defect in Incontinentia pigmenti- NEMO gene

COMMON ERRORS

- CALM's seen in NF (>6, prepubertal >5 mm, postpubertal >15 mm), TSC, & other genodermatoses
- XP vs Bloom's
  - In Bloom's Stunted growth, Erythema, Telangiectasia on the face, Early neoplasia
- EB vs Pemphigus
  - In EB, no mucosal involvement, blistering on trauma, family h/o
- Hailey Hailey vs Pemphigus
  - In Hailey Hailey no mucosal involvement, only flexures are involved, dyskeratosis, and a dilapidated brick wall appearance on biopsy
- Ichthyosis type
  - Icthyosis Vulgaris- Extensors and grey scales with upturned edges, atopy
  - Icthyosis Recessive- Dirty-looking, & adherent scales
  - Lamellar Icthyosis- Fish/plate-like scales, Colloidoin lesions

16 DISORDERS OF GLANDS

TYPES OF GLANDS IN SKIN

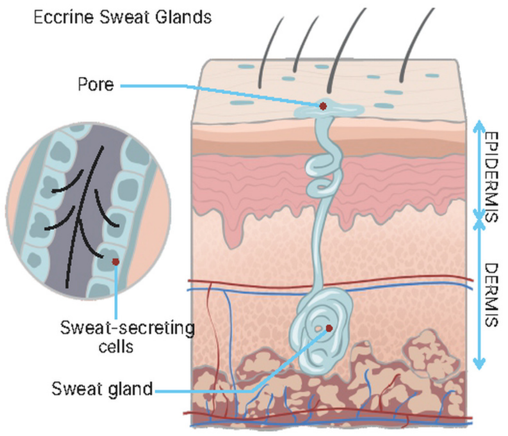
00:00:16

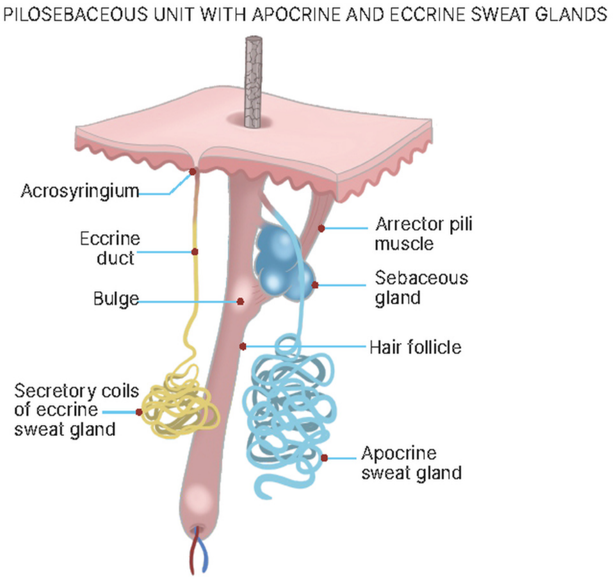
- In the skin, there are mainly 2 types of glands:
  - Sweat gland - further divided into:
    - → Eccrine gland
    - → Apocrine gland
  - Sebaceous gland

Sweat Glands

00:00:34

Feature	Eccrine Gland	Apocrine Gland
Distribution	Present all over the body (especially palms & soles)	Axilla, groin, breast area, umbilical area (apocrine distribution)
Type of Secretion	Merocrine secretion	Apocrine secretion (apical part is shed off)
Opening	Opens directly onto skin surface	Opens into hair follicle
Innervation	Cholinergic	Adrenergic
Nature of Secretion	Very watery	More mucoid than watery
Function	Sweating → Thermoregulation	Responsible for body odour
Onset of Activity	Active from birth	Activated after adolescence





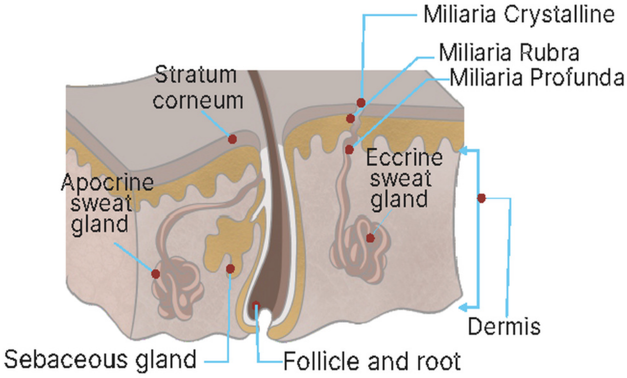
Disorders Of Sweat Glands

00:04:13

Miliaria

- Commonest sweat gland disorder
- Defect is blockage in intra-epidermal part of the eccrine sweat gland
- Based on the level of blockage:

Type	Level of Block
Miliaria crystallina	Stratum corneum
Miliaria rubra	Stratum spinosum
Miliaria profunda	Dermo-epidermal junction



- Miliaria crystallina
  - Seen in infants
  - Very shiny superficial vesicles
  - Filled with clear fluid (sweat)
  - Appears like crystals
- Miliaria rubra (Prickly heat)
  - Most common type of Miliaria
  - Occurs in summer
  - Pruritic and red raised lesions on the trunk
  - Associated with irritation

Miliaria crystallina

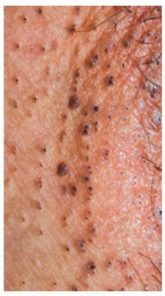
Miliaria rubra

Fox-fordyce Disease

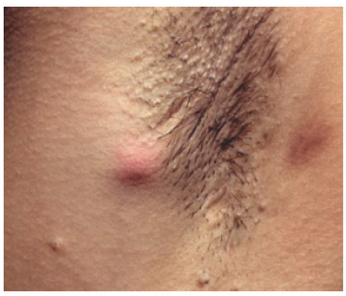
- Apocrine miliaria
  - Occurs due to obstruction of the opening of apocrine duct
  - Seen in adolescent females
  - Presents as:
    - → Pruritic skin colored yellowish papules
    - → Seen in the axilla, groin, and nipples

Hidradenitis Suppurativa

- Disorder of the apocrine gland
- AKA: Acne inversa
  - Occurs in sites opposite to where acne happens (apocrine areas)
- Seen in post-pubertal patients
- Chronic, remitting & relapsing
- Associated with:
  - Obesity
  - Smoking
  - Diabetes
- Clinical features
  - Starts with: → Polyporous (multiple) comedones
  - Progresses to painful papules, pustules, nodules, and abscesses
  - Heals with Bridging scars
- Essential Criteria for Diagnosis of Hidradenitis Suppurativa:



Polyporus comedones



Tender pustules and papules

Yourwish

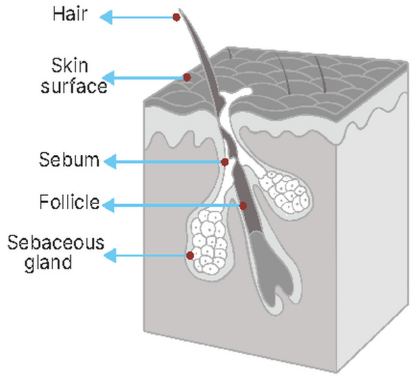
Criterion	Description
Typical lesions	Deep-seated painful nodules, abscesses, draining sinuses, bridged scars, and paired or multiheaded open pseudocomedones
Typical topography	Axillae, groin, perineal and perianal region, buttocks, infra- and intermammary folds
Presence and recurrence of lesions	

- Management:
  - Analgesics
  - Antibiotics
  - Anti-inflammatory
  - Retinoids
  - Biologics
  - Surgical therapy

Sebaceous Glands

00:10:08

- Holocrine gland: The whole gland is destroyed to release the secretion
- Located in seborrheic areas:
  - Face
  - Scalp
  - Upper trunk
- Development: During puberty
- Release Oily Secretion → Sebum



Modified Sebaceous Glands

- Open directly onto skin surface

Location	Name
Eyelids	Meibomian glands
Prepuce	Tyson's glands
Nipples	Montgomery tubercles
Lips/oral mucosa	Fordyce spots

- **Fordyce spots**
  - Yellowish grouped micropapules
  - Located on the margins of lips/oral mucosa
  - Asymptomatic

ACNE

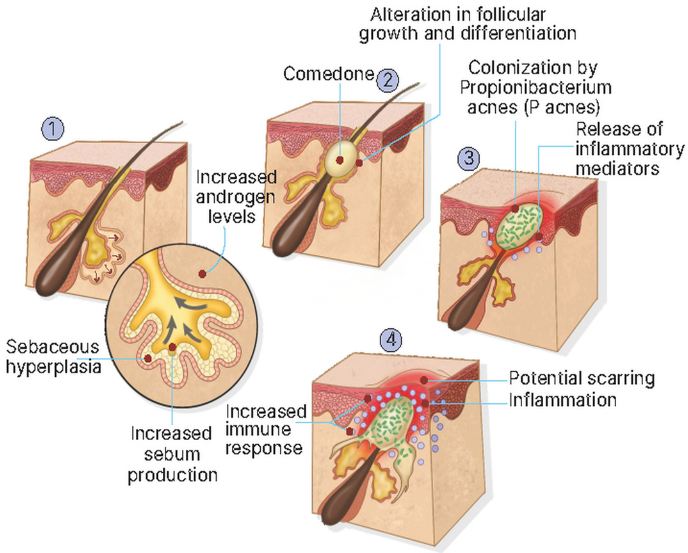
00:13:00

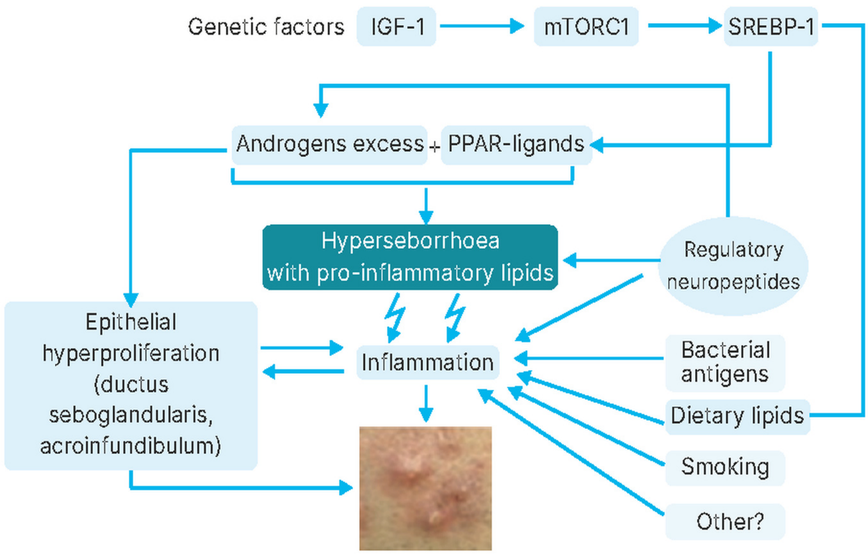
NEET PG 2023,
FMGE 2023, INICET 2021

Acne Vulgaris

- Disorder of the pilo-sebaceous duct or sebaceous gland
- Occurs in the pubertal age group
- Polymorphic lesions (lesions of different morphology)
    - Comedones
    - Papules
    - Pustules
    - Nodules
    - Abscesses
    - Scars
- Site: They occur commonly in the face and upper trunk

Pathogenesis Of Acne



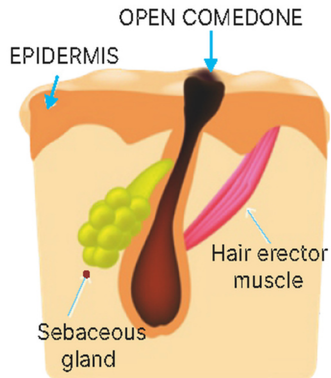
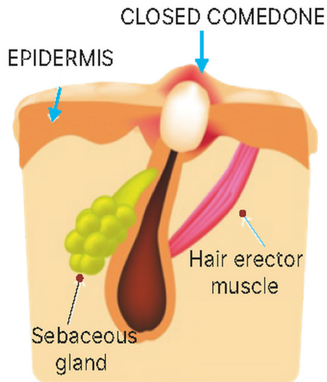


- 4 pathogenetic factors:
    - Sebaceous hyperplasia →↑ Sebum production
    - ↑ Sebum production →Altered follicular keratinisation → Comedone formation
    - Colonisation by Propionibacterium acnes on blocked ducts
    - Inflammation or increased immune response (most important)

Yourwish

Clinical Manifestations

- Comedones:
  - Typical lesions seen in acne
  - Blocked pilosebaceous duct

Feature	Open Comedone (Blackhead)	Closed Comedone (Whitehead)
Duct has an overlying skin	Absent	Present
Oxidation	Oxidation of keratin occurs	No oxidation
Appearance	Black   Open Comedones	White   Closed Comedones


Corredone


Nodules/cysts


Papules


Papules and Pustules


Acne scares

Acne Variants

00:17:58

Hormonal Acne

FMGE 2022

- Due to hyperandrogenism
- Increased sebum production → Oily skin and scalp
  - Leads to :
    - → Lower face acne
    - → Hirsutism
    - → Seborrheic capitis
    - → Hair thinning
  - Associated Features:
    - → Obesity
    - → Insulin resistance
    - → PCOS

Yourwish

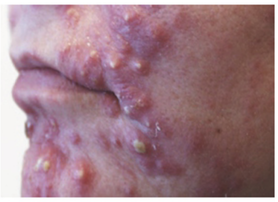
Yourwish

- Associated with :
  - SAHA syndrome: Seborrheic capitis, Acne, Hirsutism, Androgenetic alopecia
  - HAIR-AN syndrome: Hyperandrogenism, Insulin resistance, Acanthosis nigricans

Acne Conglobata

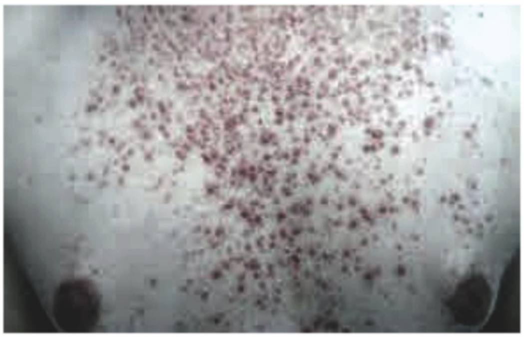
00:20:50

- Severe form of acne
  - Multiple nodules, abscesses, and intercommunicating sinuses
  - Seen usually in men on the trunk
- Treatment: Oral retinoids + short-course steroids
  - Steroids are usually contraindicated in acne



Acneiform Eruptions (drug-induced Acne)

- Drugs causing acne :
  - Steroids
  - Anti-tubercular drugs
  - Anticonvulsants
- Features that distinguish these from acne vulgaris:
  - Monomorphic
  - Mainly on trunk
  - No comedones



Grading Of Acne & Treatment

00:22:26

FMGE 2019, 2024, AIIMS 2018, NEET PG 2024

Grade	Features	Treatment
Grade 1	Mainly comedones	Topical retinoids
Grade 2	Comedones + papules + few pustules	Topical retinoids + topical antibiotics ± benzoyl peroxide
Grade 3	Comedones + numerous pustules	Add oral antibiotics to previous stage treatment
Grade 4	Nodules & cysts	Oral retinoids

Drugs Used

• **Topical retinoids** ○ Adapalene ○ Tretinoin	• **Topical antibiotics** ○ Clindamycin ○ Erythromycin	• **Oral antibiotics** ○ Doxycycline ○ Azithromycin ○ Minocycline ○ Lymecycline

Oral Retinoids (isotretinoin)

- Mainstay of treatment, as they are very effective
- Acts on all 4 pathogenetic factors
- Drug of choice in nodulocystic acne
- Dose → 0.5-1 mg/kg
- Cumulative dose → 120-150 mg/kg
- Most Important side effect: Teratogenic

Yourwish

- Can be given in child bearing age group
- Not given if planning to conceive
- 2 negative urine pregnancy tests required
- Can safely conceive 3-6 months after stopping the drug

- Side effects:
  - Dryness
  - Cheilitis
  - Dry eyes
  - Gram-negative folliculitis
  - Headache
- DOC in acne → Isotretinoin
- DOC in psoriasis → Acitretin
- Indications for hormonal therapy:
  - Not responding to conventional therapy
  - Presence of signs of hyperandrogenism, such as:
    - → Hirsutism
    - → Irregular menses
    - → PCOS features
    - → Androgenic alopecia

ROSACEA

00:28:15

- AKA: Acne rosacea (misnomer)
- Age: Adults
- Sites: Convexities of face
- Pathogenesis:
  - Inflammation + Vascular hyperreactivity → Flushing (redness and warmth of skin)
  - Triggers:
    - → Sun exposure
    - → Stress
    - → Anxiety
    - → Hot chilli food
    - → Around menstrual cycles

- Clinical Features:
  - Flushing, Erythema, Telangiectasia
  - Papulopustular lesions on the convexity of the face
  - Granulomatous stage → Phymatous Stage → Rhinophyma (Potato nose)
  - Ocular rosacea
- Types:
  - Subtype 1: Erythematotelangiectatic rosacea (ETTR)
  - Subtype 2: Papulopustular rosacea (PPR)
  - Subtype 3: Phymatous rosacea (PR)
  - Subtype 4: Ocular rosacea (OR)
- Treatment:
  - Oral ivermectin
  - Topical metronidazole

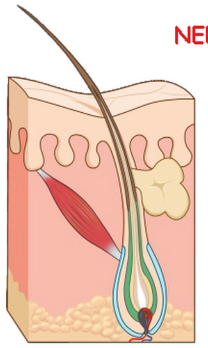
Feature	Acne	Rosacea
Comedones	Present	Absent
Flushing	No	Yes
Telangiectasia	No	Yes

MCQ

00:31:10

Q.Identify the structure marked with the arrow in the diagram provided.

NEETPG Aug 2024



A. Arrector pili
B. Sebaceous gland
C. Sweat gland
D. Hair papilla

Ans. B. Sebaceous gland

Q. A female person presented with acne that is not resolving on oral isotretinoin and antibiotics therapy. Which of the following is the next best investigation?

NEETPG 2023

A. Look for dietary triggers
B. Evaluate for hyperandrogenism
C. Check for antibiotic resistance
D. Look for drug triggers

Ans. Evaluate for hyperandrogenism

Q. A 20-year-old male presents with numerous papules, pustules, and nodules on the face and trunk, with evidence of scarring. There is history of similar acne, unresponsive to topical and oral antibiotic therapy. Which of the following drugs is the most appropriate treatment for this patient?

NEETPG Aug 2024

A. Topical tretinoin
B. Systemic doxycycline
C. Systemic minocycline
D. Systemic isotretinoin

Ans. D. Systemic isotretinoin

Q. Which of the following side effects are seen most commonly with isotretinoids (13-cis-retinoic acid)?
A. Embryopathy
B. Ebsteins anomaly
C. Neural tube defects
D. Discoloration of teeth

Ans. A. Embryopathy

Q. Where is the apocrine gland present?
A. Palm and soles
B. Face
C. Axilla
D. Scalp

Ans. C. Axilla

Q. A young woman has presented with facial symptoms. Which of the following options will not be effective for treating these symptoms?

A. Topical benzoyl peroxide
B. Topical flucinolone
C. Topical tazarotene
D. Topical antibiotics

Ans. B. Topical flucinolone

Q. What is the causative agent responsible for causing acne fulminans among the following options?
A. Actinomyces
B. Propionibacterium
C. Mobiluncus
D. Bifidobacterium

Ans. B. Propionibacterium

LAST MINUTE REVISION POINTS

00:34:06

- Location of glands
  - Eccrine → All over body, more on palms/soles
  - Sebaceous → Face, scalp, upper trunk
  - Apocrine → Axilla, groin, breast, umbilical areas
- Fox-Fordyce → Apocrine miliaria seen in adolescent females
- Hidradenitis suppurativa → Disorder of apocrine glands
  - Seen in smokers, obesity,
  - Recurrent with painful nodule, abscess and sinuses, and polyporous comedones
- Fordyce spots → Ectopic sebaceous glands
- Special lesion of acne → Comedone
- DOC Nodulocystic acne → Oral isotretinoin (Retinoids)

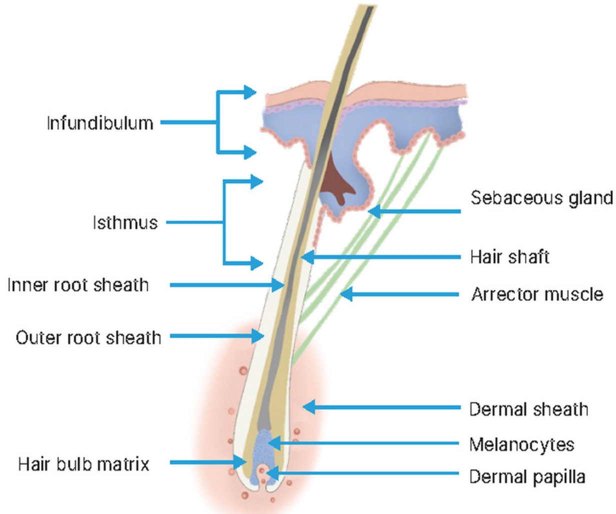
17 HAIR AND NAIL DISORDERS

HAIR STRUCTURE

00:00:20

Parts of the Hair shaft

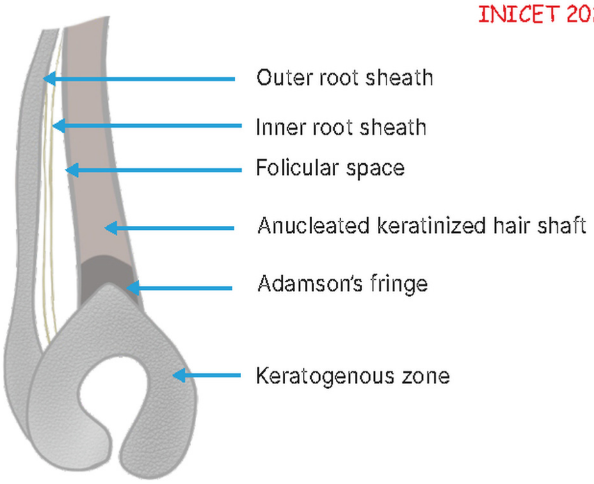
- Infundibulum → Up to the sebaceous glands
- Isthmus → Up to the Arrector pili muscle
- Lower part
  - Bulb → Harbors stem cells; any disease leads to scarring alopecia
  - Suprabulbar → Any disease leads to non-cicatricial alopecia



INICET 2022

Adamson's fringe

- Separates a small keratogenous zone in the lower part of the hair from the upper part
- Located in the supra bulbar area
- Prevents fungal invasion of the bulb



TYPES OF HAIRS

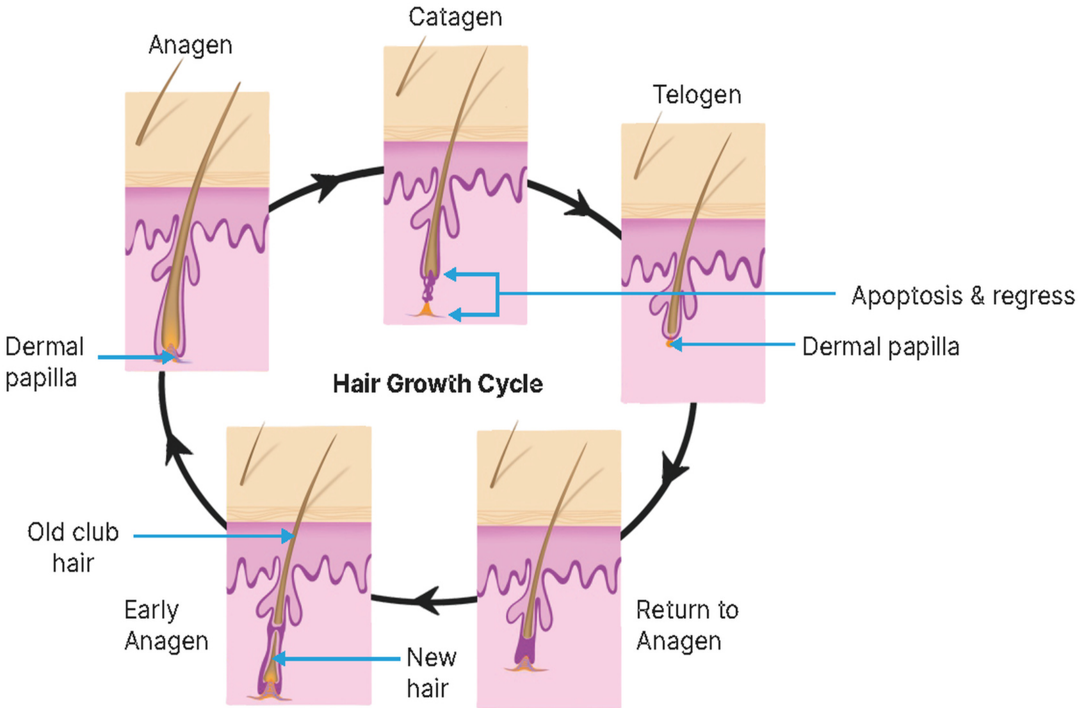
00:02:13

Lanugo hair	Vellus hair	Terminal hair
• Soft, unmedullated • Unpigmented • In utero • Premature babies	• Soft, unmedullated • Less pigmented • <2 cm long	• Coarser, Medullated • Pigmented • Longer • Androgenic location
		

HAIR CYCLE

00:03:15

FMGE 2021



Anagen	Catagen	Telogen
• Phase of growth • 2-3 yrs • Determines the length • 90% hair is in this phase	• Transition phase • 2-3 weeks • 1% hair is in this phase	• Phase of falling • 2-3 months • Responsible for normal shedding • 50-100 hair shedding is normal • 9% hair is in this phase

Note: A:T ratio is 10:1 or 9:1

HAIR DISORDERS

00:06:04

HAIR DISORDERS

- Alopecia (Loss of hair)
- Hirsutism (excessive hair growth)

ALOPECIA

00:06:27

ALOPECIA

Cicatricial
Scarring type
Stem cells are affected
No hair growth

Non- cicatricial
Non-scarring type
Does not affect the stem cells

Non-Cicatricial Alopecia

00:07:30

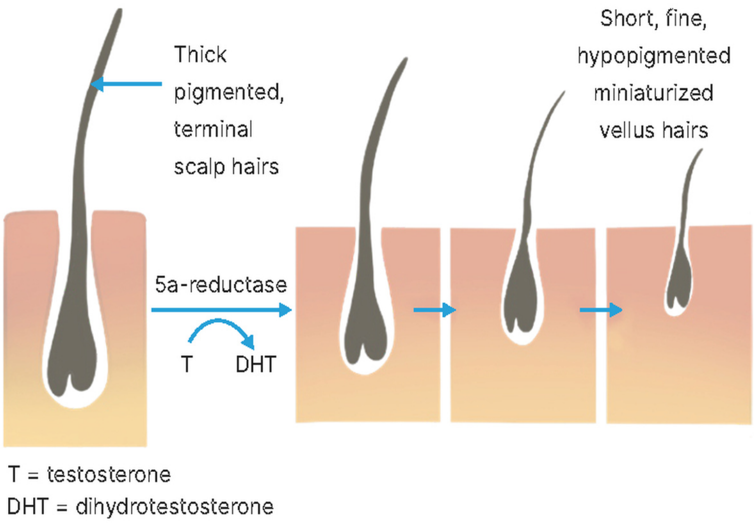
Patterned	Diffuse	Patchy
• Androgenetic alopecia • Happens in both males and females	• Effluviums • Happens in the anagen and telogen phases	• Alopecia areata • Trichotillomania • Tenia capitis (patchy, scaling, KOH+, itching) • Moth-eaten alopecia (seen in syphilis, other features of secondary syphilis)

Androgenetic Alopecia

- AKA patterned baldness
- Types
  - Male Androgenetic alopecia (Male patterned baldness)
  - Female Androgenetic alopecia (Female patterned baldness)
- Genetic susceptibility: Polygenic inheritance; family history+

Male Androgenetic Alopecia

Pathogenesis



INICET 2022, 2023, FMGE 2021

Presentation

- Frontotemporal recession
- Vertex thinning
- No itching, no scaling
- Decreased hair density

Grading of Male Androgenetic Alopecia

- Given by Norwood Hamilton

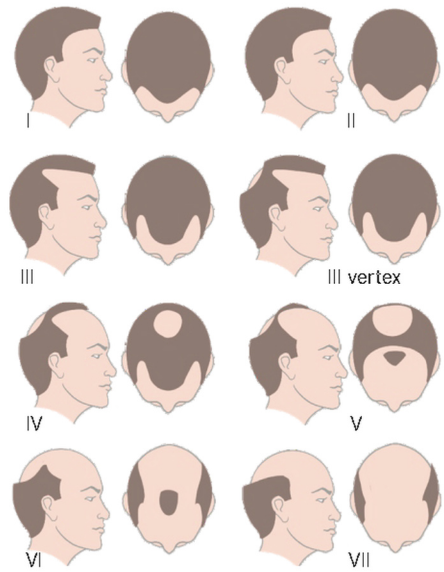
Mild frontotemporal recession that gradually increases

↓

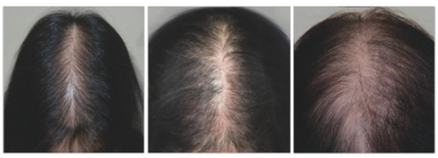
Then vertex thinning

↓

Finally, the scalp goes bald except for occipital hair, which is spared



Female Androgenetic Alopecia
- Widening of the central parting
- Ludwig's classification
- Christmas tree pattern- Grade 3



Management
- Counselling
- Topical minoxidil
    - K^+ channel opener increases blood flow
    - Females- 2%
    - Males- 5%
- Antiandrogens
    - 5-a-reductase (males)
        - → Finasteride- Type 2 5-a-reductase; 1 mg/day
        - → Dutasteride- Type 1 & 2 5-a-reductase
    - Oral antiandrogen therapy (females)
        - → Cyproterone acetate
        - → Spirinolactone
        - → OCPs
- Surgical management- Hair transplant

Effluvium

00:16:57
NEET PG 2022

- Diffuse hair shedding
- No pattern, no patch
- Types
    - Anagen
        - → Seen in pts undergoing chemotherapy
        - → Chemotherapy targets anagen hair
        - → Causes global alopecia
    - Telogen

→ Acute
→ H/o insult 2-3 months before hair loss
- Physiological- Pregnancy
- Prolonged illness- TB, COVID, Malaria, Dengue
- Mental stress
- MI, CAD, Surgery

→ Increase in shedding of telogen hairs d/t premature termination of the anagen phase of the hair cycle
→ Hair pull test +

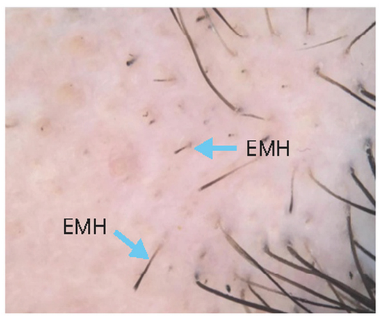
- Management
  - Counselling
  - Biotin supplementation

Alopecia Areata

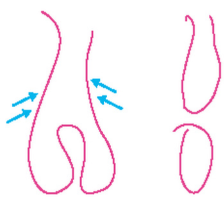
00:21:12

NEET PG 2019,NEET PG 2019, FMGE 2021

- Autoimmune (T cells targeting the hair)
- Associated with other autoimmune disorders like thyroiditis, pernicious anemia
- Presentation:
  - Patchy alopecia → Smooth, no scaling, no itching
  - Grey hair on the periphery, as they are not targeted
  - Single or multiple patches
  - Turning grey syndrome: Loss of all black hair and only grey hair is preserved



- Can involve scalp, eyebrow/eyelashes, beard, occipital (Ophiasis pattern)
- Alopecia universalis → Loss of hair on scalp, eyebrow/eyelashes, beard, occipital
- Alopecia totalis → Loss of hair only on the scalp
- Dermoscopic examination → Exclamation mark hair
- Histopathology → Intense lymphocytic infiltration, called the swarm of bees appearance



- Nail changes
  - Pitting → Regular, small pits with a geometric pattern
  - Trachyonychia → Roughened with longitudinal ridging; all 20 nails
- Treatment

- Spontaneous resolution of a single patch
- Intralesional steroids → <5 patches
  - → Triamcinolone/Kenocort- Intradermal; 3 weekly; 5mg/ml
- Oral corticosteroids → >5 patches
  - → Oral minipulse steroids- 2 days/weeks
- Contact immunotherapy
  - → Dinitrochlorobenzene
  - → Squaric acid dibutylester
  - → Diphencyprone
- Other oral agents
  - → Azathioprine
  - → Tofacitinib

Trichotillomania

00:29:27

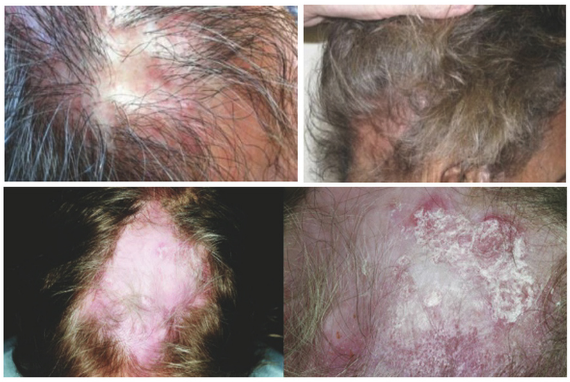
FMGE 2021

- Psychiatric disorder under DSM 4 criteria
- Pachy alopecia → Hair of unequal lengths, broken hair
- H/o pulling of hair by patient
- Clinical features
  - Patient is unaware
  - Perifollicular hemorrhage
  - Sign-friar tuck sign
- Other associated features → Trichophagia, Trichobezoar, GI obstruction
- Skin Biopsy → Empty casts, perifollicular hemosiderin
- Treatment
  - Cognitive behavioural therapy
  - SSRI
  - Paroxetine
  - NAC

Cicatricial alopecia

00:32:40

Causes



- Lichen planus
  - Follicular LP
  - Frontal fibrosing alopecia
  - Graham Little Picardi syndrome
- Discoid lupus erythematosus
- Pseudopelade of Brocq

Pseudopelade of Brocq

- Idiopathic
- Chronic
- Slowly progressive
- Patchy cicatricial alopecia without any evidence of inflammation
- Footprint in the snow appearance

HAIR SHAFT DEFECTS

00:36:00

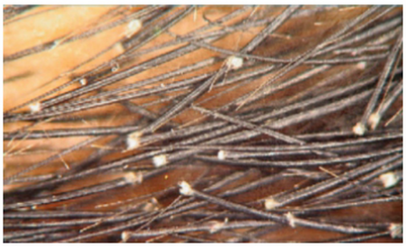
FMGE 2019, 2020, NEET PG 2024

Trichodystrophy

- Rare genetic disorder
- Characterized by brittle hair d/t sulfur deficiency
- Hallmarks: Presence of "tiger tail banding" under polarized light microscopy
  - Refers to alternating light and dark bands along the hair shaft, resembling the pattern of a tiger's tail
- Intellectual and Developmental Disabilities

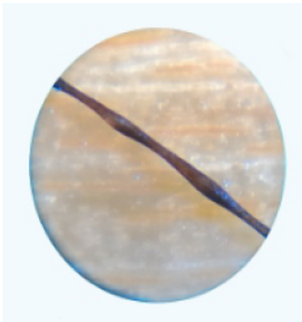
Trichorhexis Nodosa

- Congenital or acquired
- Hair breaks at nodes



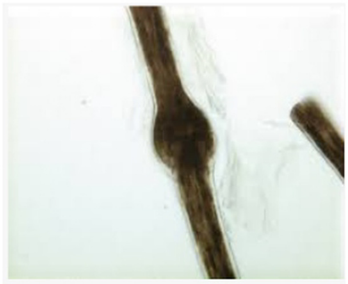
Monolethrix

- Hereditary hair disorder
- Characterized by beaded hair shafts that resemble a necklace
- Due to regular thinning and weakening of the hair shaft caused by mutations in keratin genes (KRT81, KRT83, KRT86) or the DSG4 gene



Trichorhexis Invaginata

- A hair shaft abnormality where the hair shaft telescopes into itself, forming a "ball-and-socket" or "golf tee" appearance under a microscope
- Key feature of Netherton syndrome, a genetic condition characterized by a triad of atopy, ichthyosis linearis circumflexa, and trichorrhexis invaginata
- Also known as bamboo hair



HIRSUTISM

00:39:02

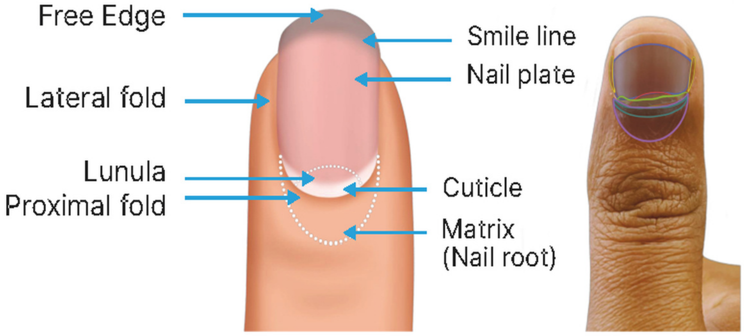
- Excessive hair growth in females in androgenic locations
- Pathology: Conversion of vellus hair to terminal hair under the effects of androgens
- Causes
  - PCOS
  - Congenital adrenal hyperplasia
  - Virilizing tumours
  - SAHA
  - Idiopathic
- Score: Ferriman-Galway
- Investigation: Based on the underlying cause

- Treatment
  - Treat underlying cause OCPs, Antiandrogens etc.
  - Physical- Laser hair reduction, long-pulsed NdYag or Diode

NAIL DISORDERS

00:41:13

Nail Structure



Beaus Lines

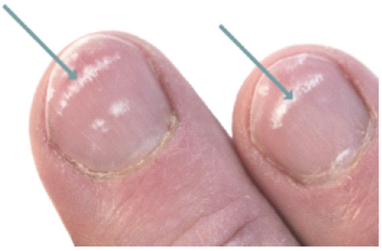
00:42:13

- Transverse grooves
- Temporary arrest in nail production
- Occurs after illness, surgery, or MI
- Helps to judge the duration of the insult, how long back

Leukonychia

00:43:24

- White patches on the nails
- True Leukonychia- Defect in nail matrix
  - Transverse- Mees lines; seen with chronic arsenic poisoning, chemotherapy; analogous to Beau's s lines
  - Punctate- Alopecia areata, trauma



Terry's Nails

00:44:41

- White proximally and normal distally
- Seen in cirrhosis, CHF, DM

Lindsay Nails

- AKA Half and Half nails
- Proximal white zone and distal brownish, sharp demarcation
- Seen in Chronic renal failure, chemotherapy

Yourwish

Pitting

- Depressions seen in the nail plate
- Seen with
  - Alopecia areata: regular, small, geometric pits
  - Psoriasis: deep, random, irregular, large pits

Trachyonychia

FMGE 2019

- AKA Twenty nail dystrophy
- Sand-blasted nails
- Grey roughened surface
- Causes- Idiopathic, Alopecia areata (MC), Lichen planus
- Usually seen in Children
- T/t-Self-resolved, steroids

Pterygium

- Wing-shaped extension of the proximal nail fold on to nail plate
- Seen in Lichen planus

Paronychia

- Inflammation of nail folds
- Acute/Chronic
  - Presents with pain, swelling, redness, and a pus point in the nail folds
- Chronic Paronychia
  - Seen in maids, housewives, wet work
  - Damage to the cuticle
  - Penetration through the nail fold causes inflammation

Acute Paronychia

Chronic Paronychia

Ingrown Toenail

- Usually d/t unequally cut nails
- Nail grows inside the nail fold
- Presents with pain, inflammation
- Remove the nail

PYQs

00:50:27

Q. Which of the following is not associated with non-scarring Alopecia?

A. Alopecia Areata

B. Androgenic Alopecia

C. Frontal Fibrosing Alopecia

D. Telogen effluvium

Ans. C.

Q. An elderly female undergoing chemotherapy for breast cancer is experiencing significant hair loss. What is the most likely cause of her condition?

A. Telogen Effluvium
B. Trichotillomania
C. Anagen Effluvium
D. Alopecia Areata

Ans. C.

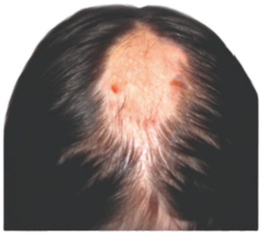
Q. A 40-year-old female - pain in the fingernail, on examination nail fold is seen with pus, most likely diagnosis?

A. Yellow nail syndrome
B. Psoriasis
C. Alopecia Areata
D. Paronychia

Ans. D.

Q. A fifteen-year-old girl presented with a history of hair loss for a few weeks, as shown in IMAGE. The patient is otherwise well. On closer examination of the site, there are multiple broken hair follicles. Diagnosis?

A. Trichotillomania showing characteristic hair of various lengths
B. Pseudopelade of Brocq showing footprints in the snow pattern
C. Alopecia areata showing exclamation mark hair
D. Ludwig type of androgenic alopecia showing miniature hair



Ans. A.

Q. What could be the likely diagnosis for the hair condition being experienced?

A. Trichorrhexis nodosa
B. Trichorrhexis invaginata
C. Trichothiodystrophy
D. Monilethrix

Ans. C.

Q. Disorder characterized by recurrent hair-pulling resulting in noticeable hair loss. Which of the following statements about trichotillomania is NOT accurate?

A. Impulse control disorder
B. The onset is typically in adolescence or early adulthood
C. Associated with feelings of pleasure or relief after hair-pulling
D. Caused by a bacterial infection of the scalp

Ans. D.

Q. What is the common association with the condition depicted below?

A. Oil drop sign

B. Leukonychia striata

C. Pterygium of nails

D. Pitting of nails

Ans. D.

Q. A 35-year-old woman presents to you with hair loss for the past three months. She tested positive for COVID-19 eight months ago. What is the most likely diagnosis?

A. Tinea capitis

B. Telogen effluvium

C. Trichotillomania

D. Female-pattern androgenetic alopecia

Ans. B.

Last Minute Pointers

- Cicatricial (LP, DLE, POB) vs non cicatricial alopecia (Patterned → AGA, Diffuse → Effluvium, Patchy → AA, Tricho)
- Norwood Hamilton classification → Male AGA
- Treatment of AGA → Minoxidil 2% (female), 5% (male), Finasteride 1 mg
- Alopecia associated with chemotherapy → Anagen effluvium
- Telogen effluvium → Insult → 2-3 months → Diffuse hair shedding
- Exclamation mark hair seen in Alopecia areata
- Nail changes of alopecia areata- Pitting & trachyonychia
- Trichotillomania classical feature → Broken hair of various lengths
- Footprint in snow appearance seen in pseudopelade of Brocq
- Pitting seen in Alopecia areata (regular, small, geometric), Psoriasis (deep, random, irregular, large)
- Paronychia → Acute: pain and inflammation of the nail folds
- Pterygium seen in Lichen planus

Common Errors

- Cicatricial vs non-cicatricial alopecia
  - Cicatritial DD
    - → LP → FFA, Follicular LP, GLP
    - → DLE
    - → POB
- D/D of patchy hair loss-
  - Alopecia areata → smooth, asymptomatic, exclamation mark hair
  - Trichotillomania → broken hairs of various lengths
  - Tenia capitis → itching, scaling, KOH+
  - Moth-eaten alopecia → Features of syphilis
- Anagen (chemotherapy, global alopecia) vs telogen (insult, diffuse hair shedding after 2-3 months)
- Pitting of Psoriasis (deep, random, irregular, large) vs Alopecia areata (regular, small, geometric),

18 MISCELLANEOUS DERMATOSES

PEDIATRIC DERMATOSES

00:00:18

Verrucous Epidermal Nevi

- Nevus of the epidermis
- Clinical presentation
  - Linear hyperpigmented verrucous plaque along the Blaschko's line
  - Presents soon after birth
  - Asymptomatic
- Treatment: Laser

Inflammatory Linear Verrucous Epidermal Nevi (ILVEN)

- A type of verrucous epidermal nevi
- A/K/A Eczematous Epidermal Nevus
- Presents with Itching
- Treatment
  - Resistant to the usual treatment regimen
  - Topical steroids are given for symptomatic relief

BECKER'S NEVUS

- A type of verrucous epidermal nevi
- A/K/A Becker's Melanosis
- Pigmented hairy epidermal nevus
- Clinical presentation
  - Hyperpigmented patch with hypertrichosis
  - Appears during adolescence
  - Common among males due to the effect of androgen
- Differential diagnosis
  - Congenital melanosis nevus: presents during birth, with rugosities

Infantile Hemangiomas

- Capillary overgrowth

Red plaque usually appears around 0-3 months

↓

Enlarges upto 9 months

↓

Then the lesion resolves

- 3 Phases of Infantile Hemangiomas
  - Phase of Initiation

- Phase of Growth
- Phase of resolution

Important Information
- Pinocchio or Cyrano nose → Hemangiomas present on the nose

- Treatment
  - Counselling
  - Medical management: Systemic steroids and Propranolol
    → Hemangiomas present on vital organs like Eyes, nose, and ears
    → Bleeding / Ulceration of the hemangioma

Salmon Patch

- A/K/A Erythema Nuchae / Stork Bite
- Capillary malformations
- Clinical presentation
  - Appears at birth
  - Superficial, reddish pink or salmon -colored irregular flat areas with telangiectasis
  - Present on nape of neck, upper eyelid, forehead, and the glabellar areas
- Inheritance - Autosomal Dominant
- Treatment: Regress on its own

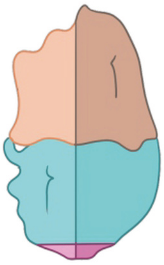
Port Wine Stain

- A/K/A Nevus Flammeus
- It is a capillary malformation
- Clinical presentation
  - Appears during birth
  - Grows with growth of body and is persistent, which does not resolve
  - Seen on face > trunk / upper limb
  - Erythematous to violaceous plaque and is unilateral in distribution
- Treatment
  - Laser - Pulse Dye laser

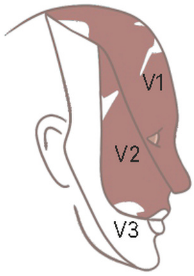
Yourwish

STURGE WEBER SYNDROME

- Facial port-wine stain in the distribution of the trigeminal nerve
- Ipsilateral leptomeningeal angiomatoses
  - Convulsions
  - Behavioural problems
  - Subnormal intelligence
- Ocular complications
  - Ipsilateral glaucoma
  - Buphthalmos
  - Congestion
  - Strabismus
  - Loss of vision
- CT or X-rays → S shaped Intracranial calcifications

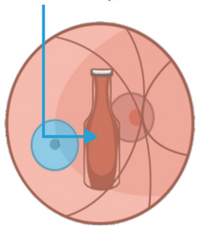


Leptomeningeal angiomatosis



Port-Wine Stain

Choroidal hemangioma



Urticaria Pigmentosa

INICET May 2024

- Commonest form of mastocytosis
- Presents usually on the skin with no systemic involvement
- Clinical presentation
  - Present before the age of 2 years
  - Urticarial wheals on the body associated with itching
    → Heal with orangish to hyperpigmented plaques
  - Darier's sign - Positive

When the skin is being stroked with sharp objects
↓
Degranulation of mast cells
↓
Local release of histamine
↓
Linear urticarial wheals

Important Information

- Darier's Disease
  - Inherited acantholytic disorder
  - Darier's sign is negative

URTICARIA AND ANGIOEDEMA

00:13:58

Urticaria

- Erythematous, Edematous, Evanescent (disappears within few hours) itchy papules and plaque
- H/O wheals
- Pathogenesis

Increased IgE
↓
Increased mast cell degranulation
↓
Histamine release

Types

Acute urticaria	Chronic urticaria
Duration less than 6 weeks • Infections (40%) - Viral infections • Injection of drugs (9%) - Penicillin, Sulfa • Ingestion (1%) - Food additives • Inhalation - pollen • Idiopathic (50%)	Daily or almost daily for more than 6 weeks • Chronic spontaneous urticaria (65%) - autoimmune, infection, and idiopathic • Physical / Inducible urticaria (35%) • Urticarial vasculitis (5%)

Physical Urticaria

- Caused by physical forces
- Various forms

Various forms of physical urticaria	
Physical urticaria	**Eliciting factors**
Dermographism	• Mechanical shearing forces • Linear wheals along the lines of scratching • M/c type • Wheals appear within 1-5 minutes  
Cold contact urticaria	• Cold objects, air, fluids, wind
Heat contact urticaria	• Localized heat
Solar urticaria	• UV or visible light
Delayed pressure urticaria	• Appears at the site of pressure on the skin • Painful rather than itchy • Wheals arising with 3-12 hours' latency • Last for more than 24 hrs • Poor prognosis
Aquagenic urticaria	• Water
Cholinergic urticaria	• Increase in core body temperature due to exercise or spicy food

- Treatment

Modern second-generation H1 antihistamines in standard dose for 1-2 weeks

↓

Increase the dose of the same antihistamine to fourfold

↓

Omalizumab (Biological against IgE), Cyclosporine, Montelukast, 1st generation antihistamines at bedtime

↓

Dapsone , Colchicine , HCQs , Methotrexate , Azathioprine , Phototherapy , Plamapheresis

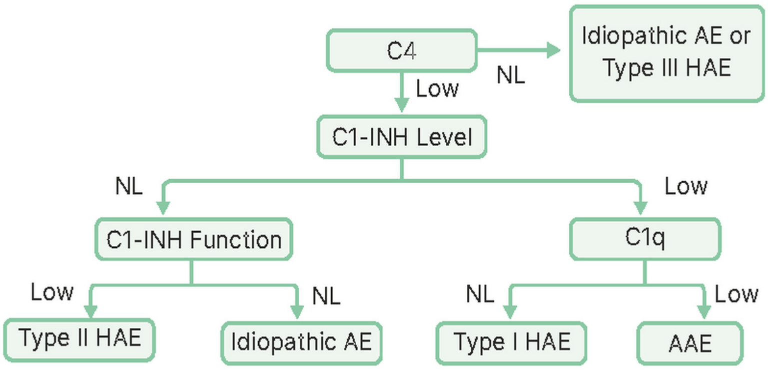
Urticarial Vasculitis

- Associated with connective tissue disease, Haematological malignancy
- Clinical presentation
  - Urticarial wheals are more painful than itching
  - Persists for more than 24 hours
  - Heals with pigmentation
- Biopsy → Leukocyclastic vasculitis

Angioedema

- Angioedema is deeper, less well-defined and involves mucosal surfaces
- Painful rather than itchy
- Less erythematous
- Hypodermis and submucosa are involved
- Takes longer than 24 hrs to resolve
- 2 types:
  - Hereditary
  - Acquired

HEREDITARY ANGIOEDEMA



- A/K/A Quincke's disease
- Inheritance → Autosomal Dominant
- Mediated by → Bradykinin
- Clinical presentation
  - H/o angioedema in family
  - Recurrent laryngeal edema
  - Colicky abdominal pain
  - Recurrent angioedema
- Types - Basis: Level of C1 inhibitor
  - Low levels of C1 inhibitor → Type I HAE
  - Decreased functioning of C1 inhibitor → Type II HAE
  - Normal levels of C1 inhibitor → Type III HAE
- Investigations
  - Levels of C4 - screening test → Low
  - C1 inhibitor level
- Treatment - Acute:
  - Airway management
  - Icatibant → Bradykinin receptor 2 antagonist
  - Ecallantide → A kallikrein inhibitor
  - Fresh frozen plasma → Contains C1 inhibitor
- Prophylaxis

- Plasma-derived C1 inhibitor replacement therapy
- Tranexamic acid
- Anabolic steroids → Danazol, Stanozolol

VECTOR BORNE DISEASE

00:25:46

Leishmaniasis

- Protozoal disease
- Vector → Sandfly
- Classification
  - Cutaneous Leishmaniasis
    → Old World Leishmaniasis
    → New world Leishmaniasis
  - Mucocutaneous Leishmaniasis
  - Visceral Leishmaniasis - Kala Azar
    → Cutaneous manifestations - Post-kala-azar dermal leishmaniasis

Old World Leishmaniasis



- A/K/A Oriental sore, Delhi boil, Baghdad boil
- Causative organisms (Mnemonic: MAIT)
  - L.major
  - L.aethiopica
  - L.infantum
  - L.tropica
- Endemic in areas like the north-eastern states, Rajasthan
- Site - Exposed parts
- Clinical presentation
  - Erythematous annular plaque with central crusting

New World Leishmaniasis

- Causative organisms
  - L.mexicana
- Clinical presentation
  - Chronic ear cartilage ulcer → Chiclero's ulcer

Mucosal Leishmaniasis

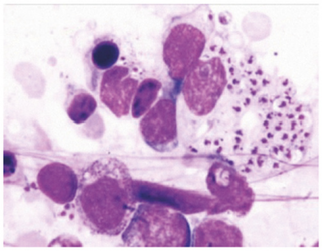

- A/K/A Espundia
- Clinical presentation
  - Erythematous necrotic plaque that destroys the nasal cartilage

Post Kala Azar Dermal Leishmaniasis

- Cutaneous sequelae of visceral leishmaniasis
- H/o kala azar 10-20 years back
  - H/o Prolonged fever and Hepatosplenomegaly

- Causative organisms
  - L.infantum
  - L.chagasi
  - L.donovani
- Endemic in north eastern areas
- Clinical presentation
  - Raindrop hypopigmented macules on body with no loss of sensation
  - Erythematous indurated plaques in the butterfly / muzzle area of the face
- Diagnosis
  - Crush smear → Giemsa stain → Leishman Donovan bodies → LD bodies → Amastigote form, found in macrophages
- Treatment
  - Parenteral antimonials → most successful but toxic
  - Lipid-based amphotericin B
  - Miltefosine
- Differential Diagnosis
  - Lepromatous Leprosy - Loss of sensation with presence of AFB in slit skin smear





Erythema Chronicum Migrans

- A/K/A chronic migrating red rash
- Characteristic of Lyme disease
- Causative organism → Borrelia burgdorferi (Spirochete)
- Vector → Ixodid ticks
- Clinical presentation
  - Erythema expands away from the central bite punctum centrifugally
  - Clears centrally within a week, leaving a red 1-2cm ring that advances for days or weeks and may reach a diameter of 50cm


TESTS AND INVESTIGATIONS

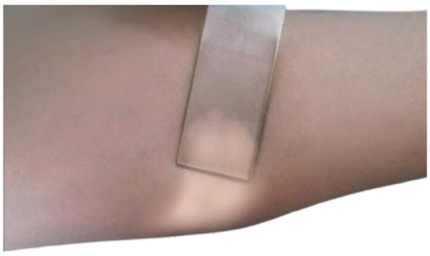
00:34:50

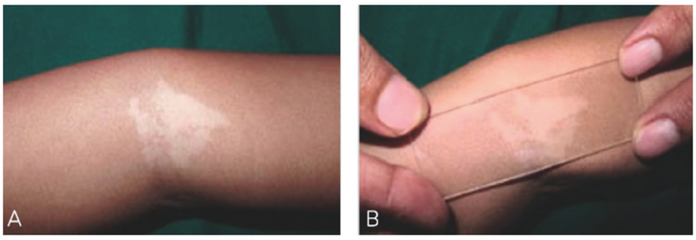
Diascopy

- Lesion is pressed with the glass slide
- Differentiate Erythema and Purpura

• Erythema → occurs due to vasodilatation → Blanchable 	• Purpura → occurs due to vasculitis, platelet and clotting disorder → Non-Blanchable 

- Differentiates Nevus depigmentosus and Nevus Anemicus
  - Nevus depigmentosus → no changes seen
  - Nevus Anemicus → merges with the normal skin

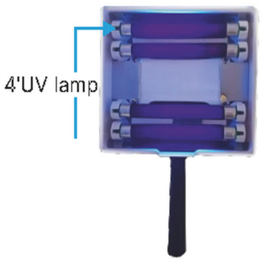


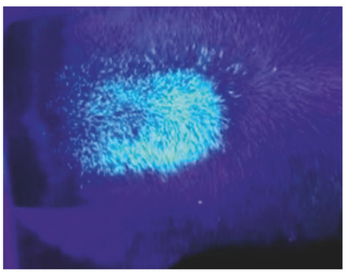


- To visualize apple jelly nodules → seen in granulomatous diseases like Lupus vulgaris and Sarcoidosis

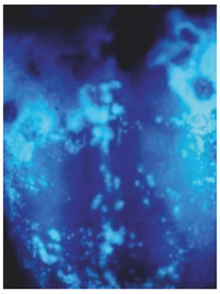
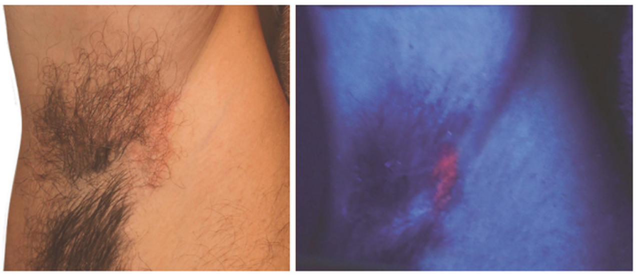
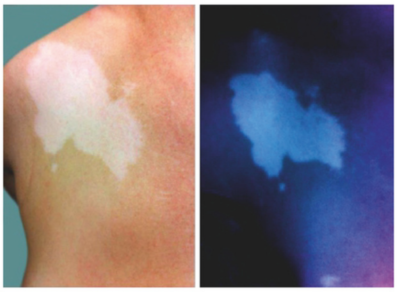
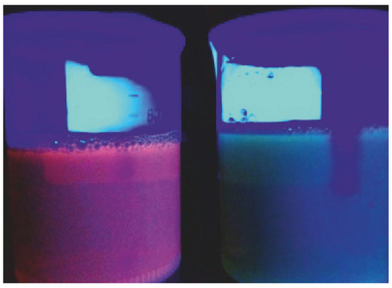
Wood's Lamp Examination

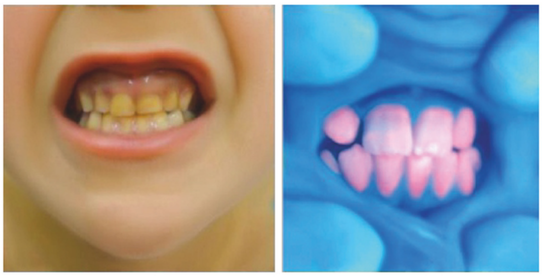
- Low-output mercury arc lamp
- Covered by Wood's filter → Barium silicate and 9% Nickel oxide
- Emits light of wavelength 320-450nm (peak 365nm)



	Applications of wood's lamp examination
Tinea capitis	Greenish fluorescence 

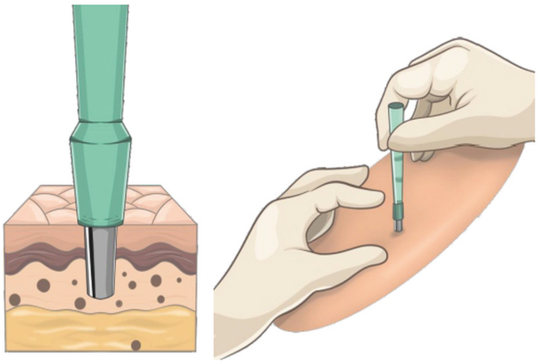
Yourwish

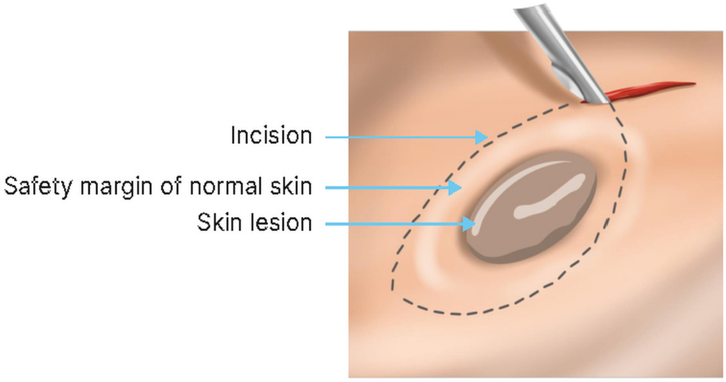
Pitriyasis versicolor	Yellowish fluorescence 
Erythrasma	Coral red fluorescence 
Vitiligo	Accentuated 
Differentiate Epidermal and Dermal Melasma	Epidermal melasma - accentuate Dermal melasma - no changes 
Porphyria cutanea tarda	Urine turns red 

Congenital erythropoietic porphyria	Reddish discoloration of teeth 

Skin Biopsy

- Incision Biopsy
- Shave Biopsy → Done in Seborrhoeic keratosis, Actinic Keratosis, Superficial lesion, and Superficial BCC
- Excision Biopsy → Done in cases like malignancies
- Punch Biopsy (M/c) → Done in Inflammatory dermatosis





PYQs

00:40:37

Q. Which type of physical urticaria is depicted in the image below?
A. Cholinergic urticaria
B. Cold urticaria
C. Solar urticaria
D. Dermographism

Answer: **D**

Q. A 16 year old male presents to the dermatology clinic with a history of developing raised , red lesions on his skin upon rubbing or scratching with a pen. Which of the following skin disorders commonly exhibits this condition?
A. Psoriasis
B. Atopic dermatitis
C. Mastocytosis
D. Pemphigus vulgaris

Answer: **C**

Q. A neonate presents with a growing skin lesion, as shown in the image provided. The mother reports that the lesion has been increasing in size daily. What is the appropriate management?

Yourwish

A. Observation
B. Excision and Laser therapy
C. Immediate Biopsy due to malignancy risk
D. Cryotherapy

Answer: **A**

Q. Based on the provided image, what is the most likely causative agent responsible for this skin lesion?

A. Borrelia burgdorferi
B. Staphylococcus aureus
C. Streptococcus pyogenes
D. Mycobacterium tuberculosis

Answer: **A**

Q.Match the following woods lamp findings

Column A	Column B
1.Erythrasma	A. Yellow
2.Pityriasis versicolor	B. Coral red fluorescence
3.Tinea capitis	C. Pink
4.Vitiligo	D. Green
	E. Milky white

A. 1-e , 2-b , 3-a , 4-d
B. 1-b , 2-a , 3-d , 4-e
C. 1-b , 2-d , 3-a , 4-c
D. 1-a , 2-c , 3-b , 4-d

Answer: **B**

Q. A 45 year old male patient from Bihar presented with normoanesthetic hypopigmented lesion as shown below. He had a history of fever for a long duration in his childhood; no thickened nerves were present. What is the probable diagnosis?

A. Tuberculoid leprosy
B. Lepromatous leprosy
C. Mycosis fungoides
D. Post-kala-azar dermal leishmaniasis

Answer: **D**

LAST MINUTE REVISION POINTS

00.43.14

- Darier's sign seen in → Urticaria pigmentosa

- Becker's nevus → Pigmentary hairy plaque, seen in adolescence
- Dermographism
  - Physical urticaria
  - Linear wheals along the lines of stroking
- Annular plaque with central crusting → Leishmaniasis
- Hypopigmented normoaesthetic lesions in endemic area → PKDL

COMMON ERRORS

00.44.20

Infantile hemangioma	Port wine stain
• 3 phases of growth • Resolves after 9 months • Not U/L	• U/L lesions • Midline • Persistent

PKDL	LL Hansen
• Normoanesthetic • Seen in endemic area • H/o kala azar	• Anaesthesia • Thickened nerves • AFB positive in slit skin smear

- Urticaria vs Urticarial vasculitis
  - Urticarial vasculitis
    - → > 24hrs
    - → Painful lesions
    - → Leaves with hyperpigmentation