

DERMATOLOGY & FORENSIC MEDICINE

allopurinol

1. A 35-year-old patient diagnosed with gout is started on medication X and develops the following skin lesions 4 weeks later. On examination cervical lymph nodes are enlarged. Blood work shows atypical lymphocytes with eosinophilia. Clinical Diagnosis is?

- a. Steven Johnson syndrome
- b. Toxic epidermal necrolysis
- c. DRESS
- d. Infectious mononucleosis



EBV
* ampicillin
↓
CBC & PS: atypical lymphocytes

* a, b = Hemorrhagic crusting of lips
SJS = <10% BSA
TEN = >30% BSA

* Sulpha drug, AED, allopurinol



young adults



I.M

2. Patient presents with complete lack of sensation over angle of mandible with a tender cord like structure seen below. Which of the following is correct about this case?

- a. Epithelioid granulomas and Type 1 Hypersensitivity
- b. Epithelioid granuloma and Type 4 Hypersensitivity ✓
- c. Neutrophilic vasculitis and Type 3 Hypersensitivity ✓
- d. Lymphocytic vasculitis and Type 1 Hypersensitivity

Type II leproa

Type I lepra reaction
Type 4 HSR



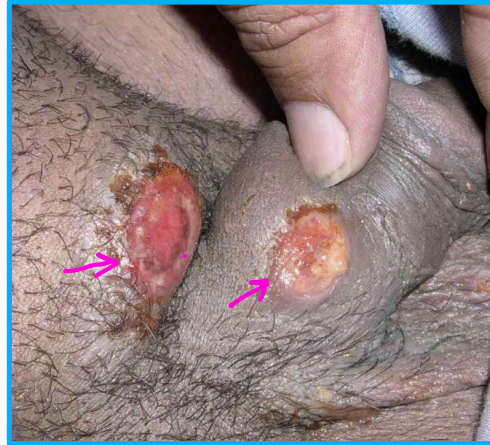
GAN

- The patient has greater auricular nerve thickening seen in the borderline spectrum of disease. These patients have type 1 lepra reaction and type 4 hypersensitivity.
- In LL when treatment is initiated then type 2 lepra reaction is seen and has type III Hypersensitivity reaction

3. Young college student presents with ulcer on the penis after unprotected sexual exposure. Which organism is likely responsible?

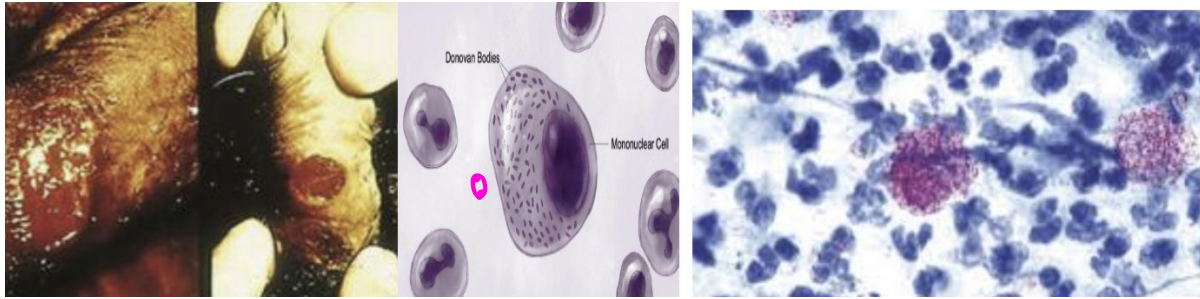
- a. Klebsiella granulomatosis
- b. Hemophilus ducreyi
- c. C. Trachomatis
- d. Herpes simplex 2

↓
LAV
+ buboes



kissing
ULCER

Scraping : mfe: school of fish
Rx: Azithromycin



Beefy ulcers + pseudo buboes + Pund cells : Option A

FLUSHING EPISODES

4. A 30-year-old lady comes in with erythema involving the face. She says the lesions are precipitated by hot sun, emotion and hot drinks. Which of the following is the most appropriate next step in management?

- a. Autoimmune panel and topical glucocorticoids
- ☒ b. Topical Metronidazole
- c. Topical Retinoids
- d. Oral isotretinoin

Nodulo-cystic acne V
Rx: minocycline, Clindamycin
Benzoic acid



Acne Rosacea
CONVEXITIES

Acne Vulgaris vs. Acne Rosacea

	Acne Vulgaris	Acne Rosacea
Chronic Inflammatory Disease	✓	✓
Comedones	✓	No
Papules and Pustules	✓	✓
Areas Affected	Widespread	Central Face (flush areas)
Occurrence	Chronic	Episodically
Triggers	Varied	Sun, heat, alcohol, strong emotions, caffeine, spicy foods

ANA +



Acne Rosacea

5. Comment on the spot diagnosis of this case?

- a. Seborrheic dermatitis
- b. Psoriasis**
- c. Lichen planus
- d. Pityriasis capitis



oil droplet

pitting
nails

Salmon
patch

* FLEXOR AREAS: Psoriasis
inverse psoriasis

* guttate Ps: Strep infection

6. A 30-year-old pharmaceutical medical representative comes with following lesions. On scratching they become more prominent. Which of the following is correct about diagnosis?

- a. Scabies
- b. Tinea corporis
- c. Pityriasis Versicolor
- d. Pityriasis alba

CIRCE of HERBA
O



Pointers for this image

Multiple round hypopigmented lesions

Fine powdery scaling

Distributed over trunk

Looks like “map-like / raindrop” pattern



Pityriasis Rosea =	Starts with herald patch and evolves into multiple oval lesions in Christmas-tree pattern on trunk, self-limiting	Viral (HHV 6/7), young adults, pruritic, resolves in 6-8 weeks HHV 6/7
Tinea Corporis	Annular, erythematous plaques with central clearing & active scaly border ('ringworm')	Fungal (dermatophyte), itchy, KOH mount tyrtase
Pityriasis Versicolor	Hypo/hyper-pigmented macules with fine scaling, more on trunk/shoulder, coalesce into patches	Malassezia yeast, accentuated on sweating, "spaghetti & meatballs" an KOH
Pityriasis Alba	Hypopigmented, ill-defined patches with fine scales, mainly on face of children	Post-inflammatory, atopic kids, improves spontaneously, emollients help

Herald patch

Oval lesions along cleavage lines

Christmas tree

Collarette scaling

Pityriasis Rosea (scales that are pink colored)



✓ HHV 7 > HHV 6

✓ ACEI , imatinib, interferon, ergotamine

Starts as herald patch and then causes collarette scales

Christmas tree pattern

Does not involve palm and soles (if seen think of secondary syphilis)

Self limiting

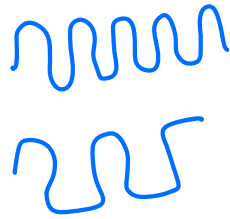
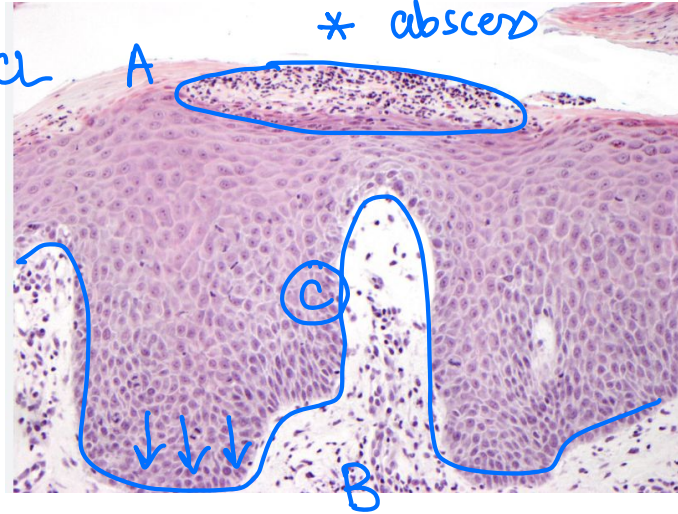
7. Which of the following conditions will show the following skin biopsy findings?

a. Psoriasis

b. Mycosis Fungoides

c. Dermatitis herpetiformis

d. Lichen planus



- MUNRO microabscess
- MF : CTCL : Pautrier microabscess
- DH: Papillary Tip " → intra E.T.G *

Microabscess formation in Dermatology

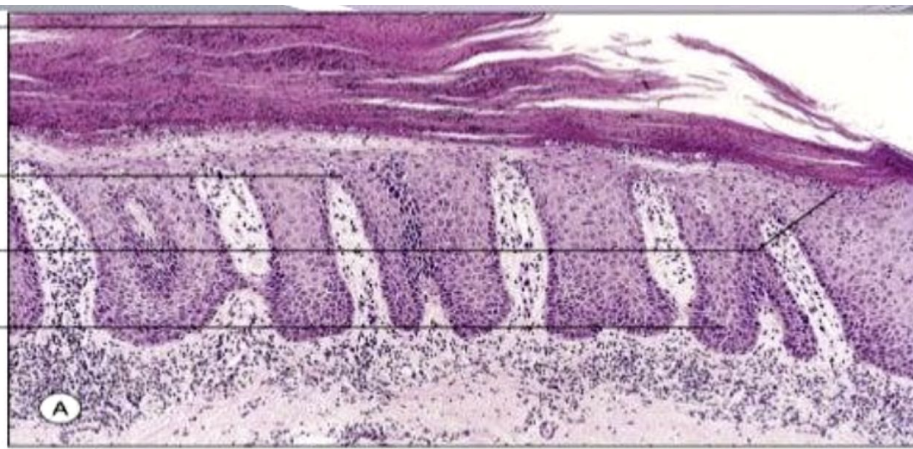
Munro's	Psoriasis, neutrophils in stratum corneum
Kogoj's spongiform pustule	Psoriasis, neutrophils in stratum spinosum
Pautrier's	Mycosis fungoides, atypical lymphocytes in epidermis
Passini's	Lupus erythematosus, neutrophils in epidermis
Papillary tip neutrophilic abscess	Dermatitis herpetiformis
Max Joseph space	LP (though more of cleft than abscess)

Confluent parakeratosis

Suprapapillary thinning

Spongiform pustule

Clubbed rete ridge

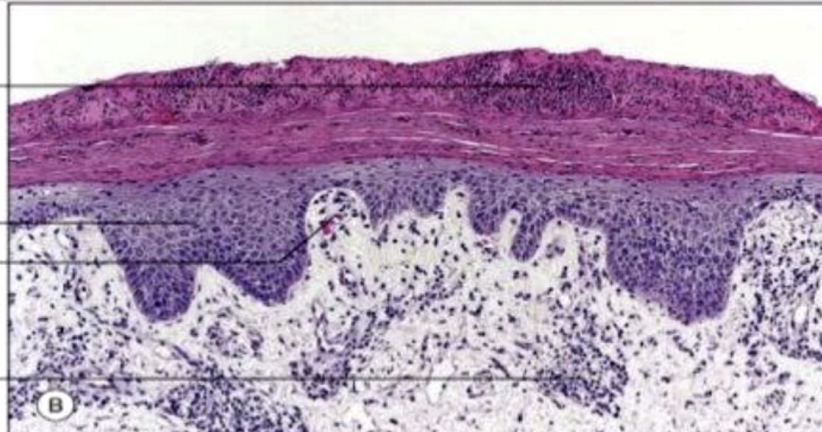


Munro microabscess

Acanthosis

Dilated capillary

Perivascular lymphocytes



8. The following presentation is seen in which of the following?

- (a) Atopic dermatitis
- b. Contact dermatitis
- c. Asteatotic eczema
- d. Dermatomyositis



DRY
SKIN

* Jewellery
* PLASTIC

DENNIS Morgan line
Repeated scratching

↓
9. Which is not correct about psoriasis?

- a. Parakeratosis nuclei in stratum corneum
- b. Seen on extensor aspects like elbows, knees, scalp
- c. Candle stain sign ← GRATTAGE
- d. Associated with HLA DR2 with positive family history
HLA CWG

Associated with HLA CW6

Th1 and Th 17 function increased and Th2 cells activity is reduced

Skin proliferation reduced from 28 days to 4 days

PSO RAM

Parakeratosis (Stratum corneum contains nuclei)

Squirting papillae contain neutrophils

Spongiform pustules of Kojoi

Rete edges prominent (Camel foot)

Acanthosis (Thickness of Spinosum is increased)

Absent granular layer

Munro microabscess

GST*
↓
⊖

Psoriatic Arthropathy : DIP *



oil droplet

Pencil in cap
Rx: MTX

10. DIF study of skin biopsy taken from the lesions is shown below. The diagnosis is?

a. Dermatitis herpetiformis focal IgA deposits

b. Lichen planus PURPLE

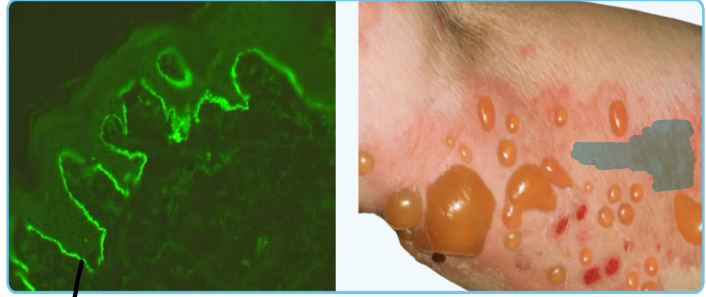
c. Bullous pemphigoid

~~d.~~ Pemphigus Vulgaris

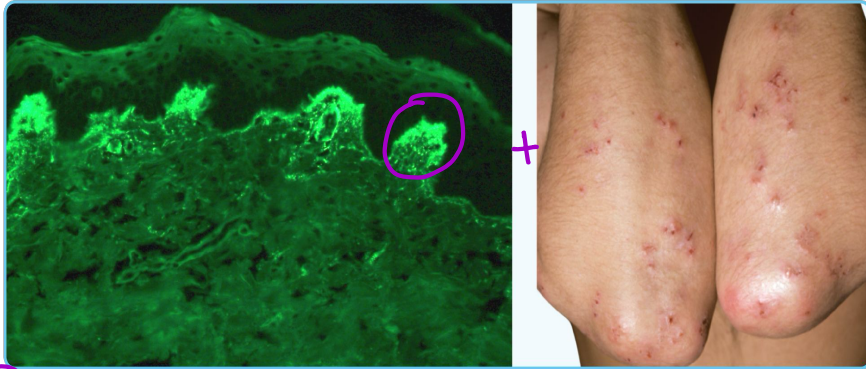
↓
fish net

* Flaccid vs Tense bulle

* Erythematous surrounding



11. Correct about the disease shown in this 15-year-old boy is:



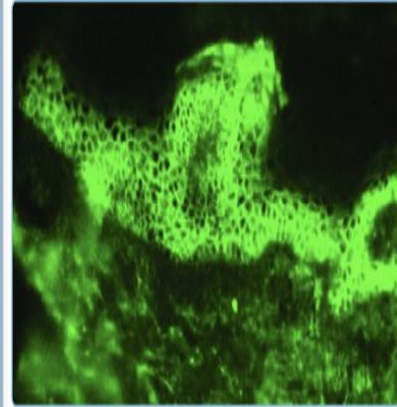
PRURITIC papules on
elbows
shin, knee : (DH)

- a. Focal granular Ig A deposits at dermo-epidermal junction
- b. Lesion flare up with withdrawal of gluten : X
- c. Start patient on Didanosine dapsone
- d. Antibody responsible for cutaneous lesion is Anti TTG antibody ^E

12. Correct about the cause of this skin disease and IF appearance is?

- a. Nikolsky sign + and bulla spread sign +
- b. Nikolsky sign - and bulla spread sign +
- c. Nikolsky sign + and bulla spread sign -
- d. Nikolsky sign - and bulla spread sign -

BP
==



PV $\Rightarrow$ flaccid bullae Fish net app
desmosomes #
* anti desmoglein 3, 1

Bulla Spread Sign	Nikolsky Sign
Press on blister	Rub normal skin
Blister enlarges	Skin peels off
Fluid spread	Epidermal detachment

13. Which of the following is your spot diagnosis?

- ☒ a. Becker nevus
- b. Nevus of Ito
- c. Nevus of Ota
- d. Spitz nevus





CALM

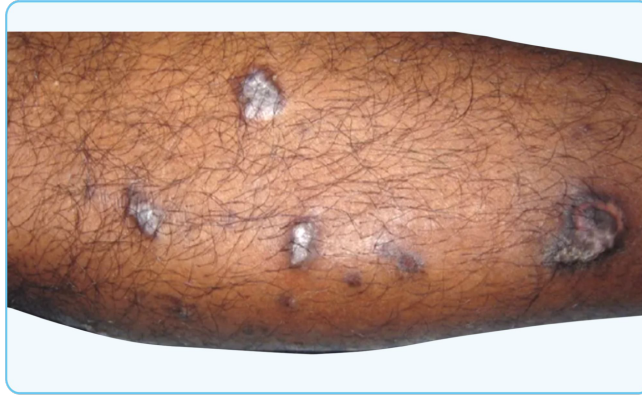


Congenital melanocytic nevus



14. The following skin lesion is associated with

- a. Hepatitis B
- b. Hepatitis C**
- c. EBV
- d. HPV 6,11



↓
Condyloma
acuminata

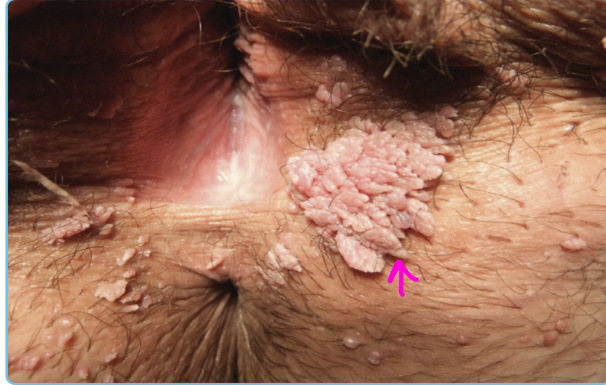
PAN
HBs Ag +

Purple
Polygonal
plaques
Wickham
STRIAE

Extrahepatic features : Hep C : LP
 ↳ essential cryoglobulinemia
oral LP = dental Amalgam

15. The following lesions in pregnant lady are treated by which of the following?

- a. Imiquimod ✗
- b. Trichloroacetic acid
- c. Acyclovir
- d. Foscarnet

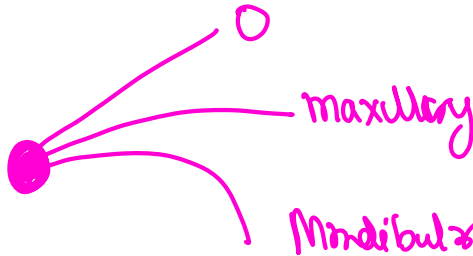


Condyloma acuminata

16. The following lesions occur due to

- a. Reactivation of Varicella zoster in meckel cave
- ~~b.~~ Reactivation of varicella zoster in Dorsal root ganglia
- c. Reactivation of Herpes zoster in meckel cave
- ~~d.~~ Reactivation of Herpes zoster in Dorsal root ganglia

Spinal cord



Mandibular ✓

- ✓ DRG: DERMATOME: Intercostal N
- ✓ VII n: Ramsay Hunt syn
- ✓ Vn in Meckel: HZO



Hutchinson sign

* HZO, shingles

17. The following clinical sign is seen in which of the following;

a. COL4A5 → ALPORT

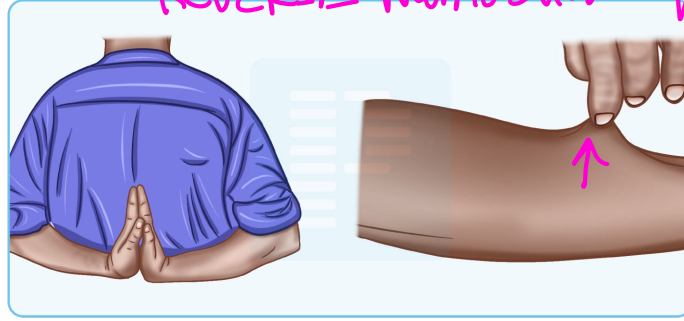
b. COLA51 → EDS

c. COL1A1

d. COL1A2

Osteogenesis
Imperfecta

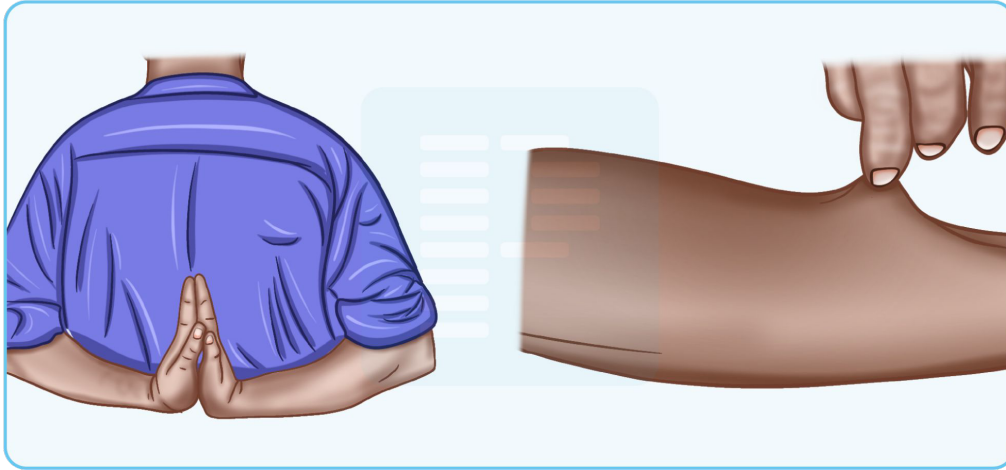
REVERSE Namaskar sign



ALPORT: Panch: $\alpha 5$ chain of Type IV collagen

* EDS: AORTIC RUPTURE
Type III

Reverse Namaskar sign of Ehler Danlos



18. This tall patient patient was admitted with spontaneous pneumothorax. Echo shows aortic root dilatation. Which of the following genetic mutations is most likely?

a. COL5A1

b. COL4A

c. FMR1

fragile X

☒ d. FBN1



Arachnodactyl



Pectus excavatum

MARFAN: Fibrillin

19. A 20-year-old female rag picker comes with complaints of pruritus that worsens at night and after a hot bath. She is currently in T1 of pregnancy. Lesions on hands are shown below. Which is not correct about this condition?

- a. Permethrin can be used in pregnancy ✓
- b. Lesions follow circle of hebra ✓
- c. Called vagabond disease Pediculosis
- d. Face and scalp are spared in adults ✓

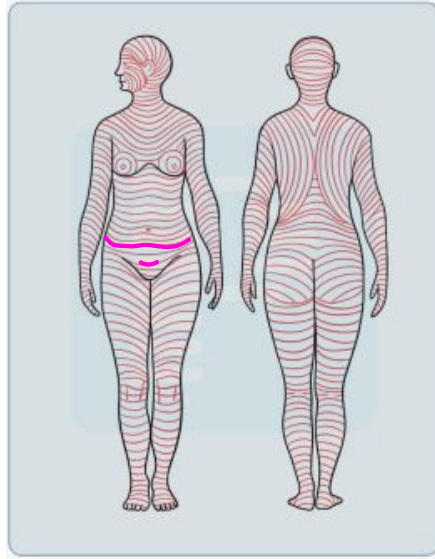


SCABIES

Norwegian scabies : HIV +
oral IVERMECTIN

20. Which is correct about these lines shown below

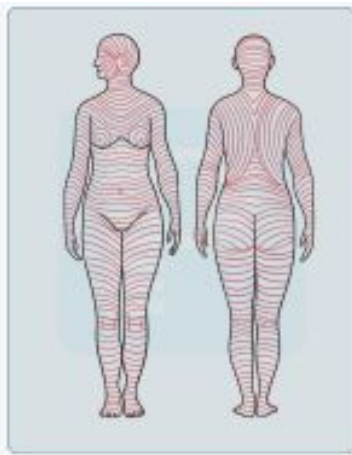
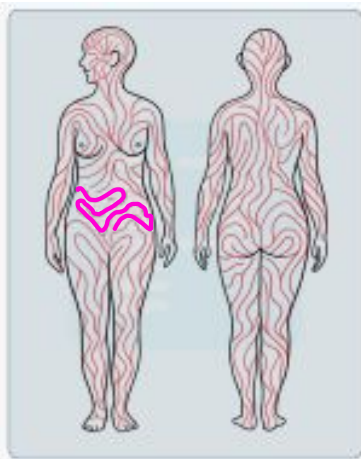
- a. Kraissl lines
- b. Blaschko lines
- c. Langer lines
- d. Wallace lines

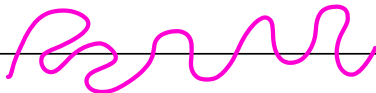


Clint
East wood

B

C

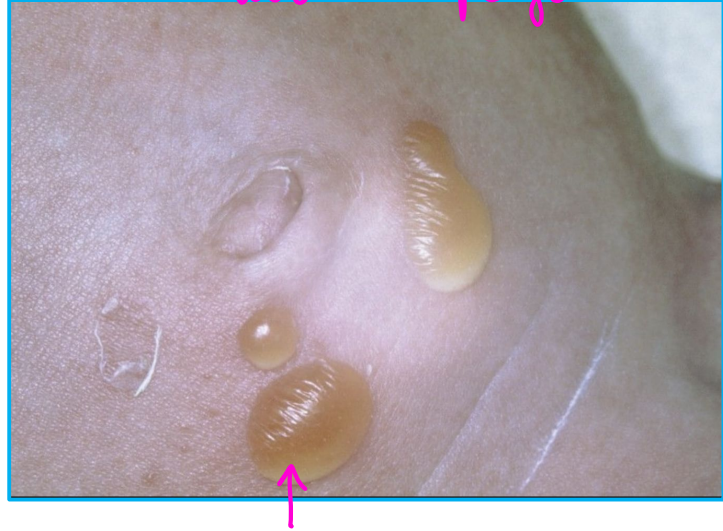


Kraissl	Wrinkle lines ✓
Langer lines	Surgical incision along these collagen fibers heal with less scarring
Blaschko lines	Pathways of keratinocytes migration 
Wallace	Line on lateral aspect of palms and soles where the glabrous skin meets with hair bearing skin

21. The following clinical sign shown in case of infant with documented Staph. Aureus infection is called?

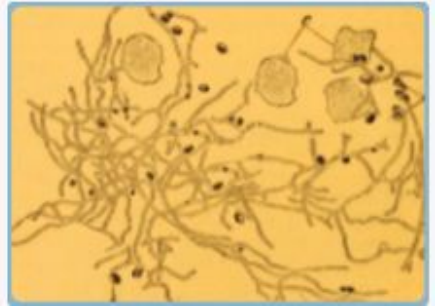
- a. Nikolsky sign
- b. Bulla spread sign
- c. Pear sign *PV*
- d. Hypopyon sign 

Bullous impetigo



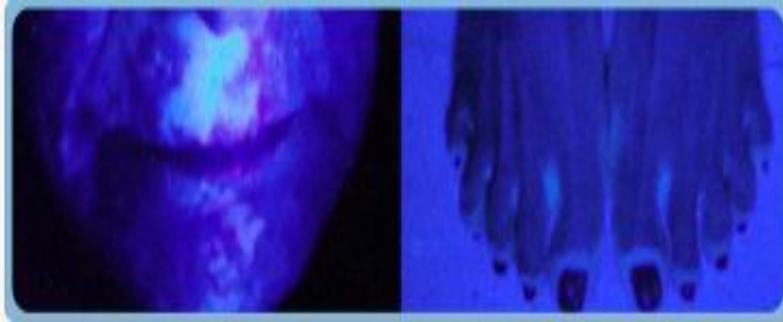
22. Which is the correct treatment of this condition?

- a. Selenium sulfide plus ketoconazole
- b. Voriconazole
- c. Itraconazole
- d. Caspofungin



* Pityriasis VERSICOLOR

23. Which of the following is correct about instrument used in dermatology?



- a. Nickel oxide plus silica and light generated is 360 nm
- b. Nickel oxide plus silica and light generated is 560 nm
- c. Nitinol plus silica and light generated is 360 nm
- d. Nitinol plus silica and light generated is 560 nm

← WOOD lamp

Condition	Organism/ cause	Color
Tinea versicolor	Malassezia	Yellow / golden ✓
Erythrasma	Corynebacterium	Coral red ✓
Pseudomonas infection	Pseudomonas	Green
Vitiligo	Loss of melanin	Milky white / blue-white
Tinea capitis	Microsporum	Blue -green

24. Which is correct about tinea incognito:

- a. Extensive tinea leading to pluckable hairs
- b. Extensive tinea with inflammatory pustular infection of scalp
- c. Extensive tinea with atypical appearance due to use of steroids**
- d. Extensive tinea involving groin or perianal region





25. Which of the following drugs will not be used for management of this condition?

- a. Terbinafine ✓
- b. Clotrimazole ✓
- c. Ciclopirox ✓
- d. Cidofovir ~~~~~



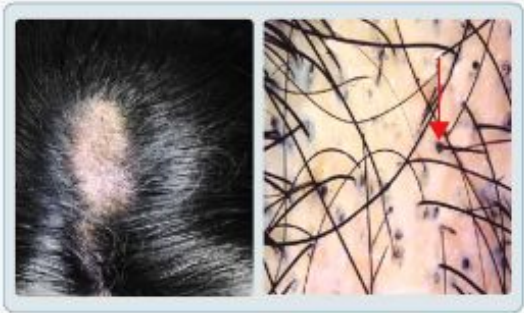
Athlete foot

26. Correct about the diagnosis of this 5-year-old child?

- a. Tinea capitis
- b. Trichotillomania
- c. Alopecia areata
- d. Moth eaten alopecia

↓
Syphilis



Alopecia areata	Tinea capitis	Trichotillomania
		
Exclamation mark sign	Comma hair Black dot sign	V sign for two or more hair shafts emerging from the same follicular opening are broken at the same length

Moth eaten alopecia is seen in secondary syphilis



V-sign



Exclamation
mark hair



Comma
hair

27. A 30 year old woman with PCOD has extensive acne. She plans to conceive in the near future. Which of the following is the best treatment for this case?

- a. Isotretinoin with Azelaic acid
- b. Isotretinoin with doxycycline
- c. Cyproterone acetate + Spironolactone
- d. Topical retinoids

Hormonal acne

DHEAS ↑

estrogen ↓

Rx: [CYPROTERONE
spironolactone]

✓
28. What is the treatment of this lesion seen in this obese diabetic?

- a. Topical desonide **STEROID**
- b. Topical Benzoic acid
- ☒ c. Topical Clindamycin
- d. Topical Clobetasone **STEROID**



ERYTHRAEMA

29. The following honey crusting is caused by which of the following organisms and what treatment is done?

- a. Staph Aureus, Topical Soframycin
- b. Streptococcus Pyogenes, Topical mupirocin**
- c. Streptococcus Pneumoniae, Topical clindamycin
- d. Coagulase negative Staphylococcus, Topical metronidazole



Strept. pyogenes *

Diagnosis? Bullous impetigo: S. AUREUS



Hypopyon skin ✓

30. Known case of ulcerative colitis on topical steroids and mesalamine presents with the following skin lesions. Diagnosis is:

- a. Pyoderma gangrenosum
- b. Ecthyma gangrenosum
- c. Necrotising fasciitis
- d. Erythema multiforme

Pseudomonas
febrile neutropenia



31. The following lesions are caused by?

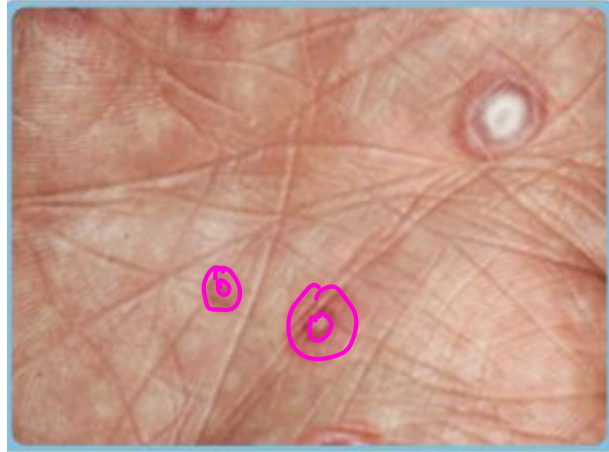
- a. HSV-1
- b. HSV-2
- c. Secondary syphilis
- d. Herpetic Whitlow

DENTIST

HFMD
EMT
2° syphilis
Rickettsiae

Rach
palms
soles

ERYTHEMA MULTIFORME



↓
Target
lesion

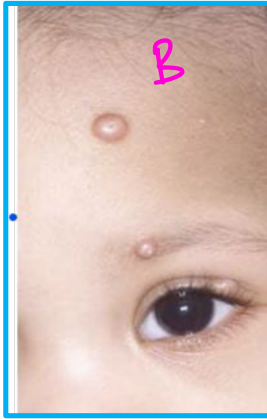
32. A 6-year-old child presents with multiple, small flat topped papules. Histology shows ball and claw appearance. What is the most likely diagnosis?

- a. Verruca vulgaris **WARTS**
- b. Molluscum contagiosum **⊙**
- ⊙** c. Lichen nitidus
- d. Keratoacanthoma





HPV 2 and 4



Low grade SCC

33. A 25 year old female presents with red brown plaques on face. She recently tested positive for sputum for AFB twice. Which is not correct about this case presentation?

- a. Diascopy shows apple green nodules ✓
- b. Earliest sensation lost is heat and cold differentiation ✓
- c. Can develop Squamous cell carcinoma ✓
- d. Destroy nasal and ear cartilage ✓

leprosy

lupus vulgaris



↓
34. Buruli ulcer is caused by which of the following

- a. Mycobacterium ulcerans
- b. Mycobacterium marinum
- c. Mycobacterium leprae
- d. Mycobacterium Kansasi

Fish Tank granuloma

35. Which of the following is preferred site for nerve biopsy in patient with leprosy

a. Superficial branch of radial nerve

b. Sural nerve → C.I.D.P, CMT

c. Ulnar nerve

d. Posterior tibial nerve

36. MC cranial nerve involved in case of hansen disease?

- a. Ulnar nerve
- b. Common peroneal nerve
- c. Facial nerve
- d. Lateral cutaneous nerve of thigh

37. A 28-year-old female presents with recurrent episodes of intensely itchy lesions on her hands. On examination, there are multiple deep-seated vesicles on the lateral aspects of fingers and palms, giving a "tapioca pudding" appearance. Diagnosis is?

- a. Scabies *interdigital cleft*
- b. Secondary syphilis *fever + LN*
- ☒ c. Pompholyx *blocked sweat*
- d. Herpangina *HFMD*



PTX ✓
38. A 6-year-old child presents with severe sunburns, freckling. Biopsy from skin shows SCC. Genetic analysis reveals a defect in repairing ultraviolet radiation-induced thymidine dimers. Which of the following is the most likely underlying abnormality? =

- a. Mismatch repair defect
- b. Base excision repair defect
- c. Nucleotide excision repair defect
- d. Homologous recombination defect

XP: XERODERMA PIGMENTOSA

39. A 24-year-old man develops sudden swelling of lips, eyelids, and genitalia after eating peanuts. The swelling is non-pitting, non-pruritic, and without urticaria. Which of the following is the most likely diagnosis?

a. Quincke's disease

→ Angioedema

b. Anaphylaxis

SOB, HR↑ BP↓

c. Toxic shock syndrome

MEASLES VACCINE, Tampon use

d. Urticaria

ITCHING

40. Most common skin manifestation seen in patients with diabetes mellitus?

- a. Diabetic dermopathy
- b. Necrobiosis Lipoidica diabetorum
- c. ^{IR} Acanthosis nigricans ^{Hyperpigment}
- d. Skin thickening of palms and soles



Binkley SPOTS

✓ T1DM
✓ ♀ > ♂
✓ 
clearing

Skin Manifestations in Diabetes Mellitus

Condition	Key Clinical Features	Common Sites	Association with DM
Diabetic dermopathy	Small, round/oval, brownish atrophic macules ('shin spots']	Pretibial areas (shins)	Very common, seen in >50% diabetics
Necrobiosis lipoidica diabeticorum	Yellow-brown strophic plaques with central thinning and telangiectasia, may ulcerate	Anterior limbs	Rare (~0.3-1%), strongly associated with long standing DM
Acanthosis nigricans	Hyperpigmented, velvety thickening of skin folds	Neck, axillae, groin	Seen in insulin resistance (T2DM, obesity, PCOS, metabolic syndrome)
Skin thickening (scleredema diabeticorum/waxy skin)	Waxy skin, stiffness, limited joint mobility ("prayer sign")	Dorsum of hands, palms, soles, upper back	More in long-standing, poorly controlled DM

41. Grouped vesicles on glans penis in young college student with bilateral tender inguinal lymphadenopathy is seen in?

- a. Groove sign of C. Trachomatis
- b. Pseudo-buboes of Granuloma inguinale
- c. Phagedenic lesions of H. Ducreyi
- d. Genito ulcerative lesions of Herpes simplex 2**

LAV

Donovanosis

HSV-2 : acyclovir

42. Cor bovinum and tree bark appearance of ascending aorta is seen with?

a. Primary syphilis

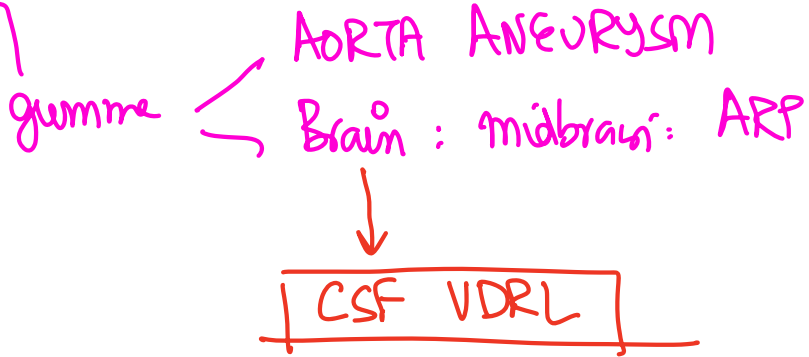
CHANCER HARD

b. Secondary syphilis

RASH + FEVER + W + C. lata

☒ c. Tertiary syphilis

d. Quaternary syphilis



43. The patient is diagnosed with neurosyphilis. Which of the following is the most appropriate treatment?

a. Benzathine penicillin

Im. single : 1^o syphilis

b. ~~Procaine penicillin~~

Im x 10 days

c. Penicillin V **ORAL**

d. Crystalline Penicillin

CROSS BBB

PenG

44. A 28-year-old man presents with a history of a small, painless genital ulcer that healed spontaneously within a few days. Two weeks later, he develops painful inguinal lymphadenopathy with multiple tender nodes that have coalesced to form "groove sign. Which color kit would be used in this patient under syndromic management?

- a. Red
- ☒ b. Black
- c. Green
- d. Yellow

Kit.	Syndrome	Colour	Contents
1	Urethral Discharge(UD), Ano-Rectal Discharge, Cervicitis/Cervical Discharge	GRAY	Tab. Azithromycin 1gr(1) & Tab.Cefixime 400mg (1)
2	Vaginitis	GREEN	Tab.Secnidazole 1gr(2) & Tab.Fluconazole150mg (1)
3	Genital Ulcer Disease - Non-Herpetic (GUD-NH)	WHITE	Inj.Benzathiene Pencillin 2.4MU(1) & Tab.Azithromycin 1gr(1)
4	Genital Ulcer Disease - Non-Herpetic (GUD-NH)	BLUE	Tab.Azithromycin 1gr(1) Tab.Doxycycline 100mg (30)
5	Genital Ulcer Disease-Herpetic (GUD-H)	RED	Tab. Acyclovir 400mg (21)
6	Lower Abdominal Pain (LAP)	YELLOW	Tab.Cefixime 400mg (1), Tab.Metronidazole 400mg(28) Tab.Doxycycline 100mg (28)
7	Inguinal Bubo (IB)	BLACK	Tab.Azithromycin 1gr(1) Tab.Doxycycline 100mg (42)

45. A 30 year old alcoholic consumed alcohol from a local shop. After one hour he became delirious and developed snow field vision followed by blindness. Work up shows high anion gap metabolic acidosis. Which of the following will be used in management of this poisoning?

- a. Thiamine + Dextrose WE
- b. Pyridoxine
- c. Cyanocobalamin
- d. Folic acid

* methanol poisoning
Hooch Tragedy

Rx: 1. Fomepizole
2. Folic acid

46. Death in throttling is due to ?

HYPOXIA → Cardiac Arrest

a. Inward compression fracture of hyoid bone

b. Cardiac arrest

c. Carotid artery ~~dissection~~

d. Physical Blockage of trachea

FOOD BOLUS

47. A young unknown person is brought dead to the ER. Which of the following will make you suspect strangulation as the cause of death?

a. Ligature mark above the level of thyroid

HANGING

b. Bloody froth at nose and mouth with cyanosis

c. Saliva dribbling from side of face ✓

d. Pupillary dilatation and eyes wide open ✓

le facies sympathique

sympathetic ganglia *

48. In a religious procession there is a stampede that led to the death of multiple people that have now been brought to ER. What is the cause of death?

- a. Perthe syndrome
- b. Positional asphyxia
- c. Choking
- d. reflex vagal inhibition of heart

49. A young person was making instagram reels by jumping into the cold water of a river in early December morning. He jumped into the water and could not swim. His body was fished out by police divers 5 km downstream. What is the plausible cause of death?

a. Laryngeal spasm

DRY DROWNING

☒ b. Immersion syndrome

HYDRATION +

c. Hyperkalemia due to lysis of RBC

d. Hypovolemia and hemoconcentration

50. The most important external sign of typical drowning?

- a. White lathery froth at mouth and nostril
- b. Cadaveric spasm
- c. Cutis anserina
- d. Presence of sand in the airways

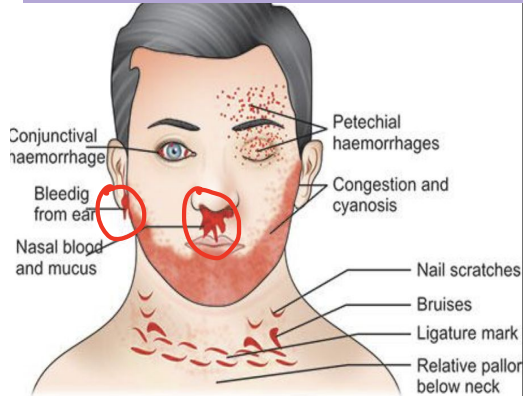
TERMINAL SPIN

STRANGLING



The "mushroom of froth" is one of the most classic signs of drowning.

Throttling



Horizontal ligature mark
Below thyroid cartilage
Cyanosis + congestion
Petechiae + bloody froth

- **Composition:** A mix of air, water, mucus, and surfactant whipped into a fine lather by respiratory efforts.
- **Appearance:** White or pinkish (due to blood), fine bubbles, resembles shaving cream.
- **Persistence:** Unlike edema froth from heart failure, drowning foam is tenacious and may re-accumulate after wiping.
- **Significance:** Strong indicator of *vital reaction* (the person was alive and breathing when submerged).

51. The most important internal sign of drowning is?

- a. Sub pleural hemorrhages
- ☒ b. Water in lungs and stomach
- c. Water and hemorrhage in middle ear
- d. Diatoms test

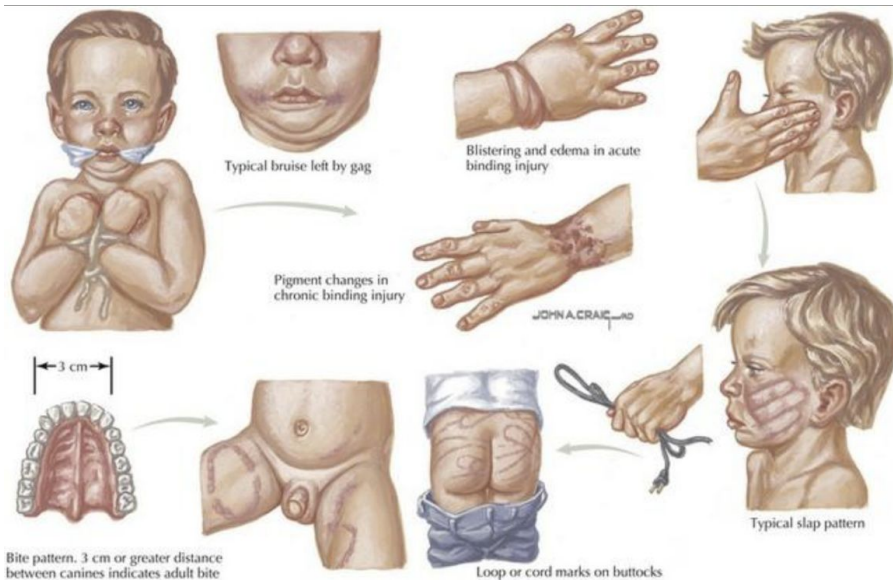
*
PALTAUF Hemorrhage

52. Contusion or bruise is not seen at which of the following sites

- a. Face
- b. Scrotum
- c. Soles
- d. Breast

53. Butterfly bruise is seen in:

- a. Child abuse
- b. Love bites
- c. Marking nut juice(*Semicarpus calotropis*)
- d. Ectopic bruise



Feature	Battered Baby Syndrome (Non-accidental trauma)	Osteogenesis Imperfecta
History	Inconsistent history, delay in seeking care, multiple episodes explained poorly	Family history of fractures, autosomal dominant inheritance (COL1A1/COL1A2 mutations)
Fractures	Multiple fractures at different stages of healing. especially ribs, metaphyseal corner ("bucket handle") fractures	Recurrent fractures after minimal trauma, often diaphyseal
Other injuries	Bruises, burns, retinal hemorrhages, subdural hematomas	No soft tissue injuries suggestive of abuse
Sclera	Normal	Blue sclera (classical finding)
Teeth	Normal	Dentinogenesis imperfecta (opalescent teeth, early wear)
Hearing	Normal	Hearing loss (due to otosclerosis)

54. A 2-year-old child is brought by a mother to the emergency with a history of excessive crying followed by sudden silence and drowsiness. The senior nurse tells you that the mother is a single mother and has brought a child to the ER previously also. Examination reveals scalp swelling and periorbital bruises. Work up is shown below. Which of the following is the most likely diagnosis?

- a. Osteogenesis imperfecta
- b. Rickets
- c. Battered baby syndrome
- d. Scurvy



HEALED #

Retinal
Hemorrhages

X-ray of ribs and long bones show bucket handle fractures with fundus showing retinal bleeds.



55. A farmer is working in the field in hot Indian summer in the month of may when he collapses and is brought to ER. On examination pulse is 120/min, BP 90/60 mm Hg with moist cold clammy moist skin and temp of 37.6 C. Diagnosis is?

- a. Heat cramps
- ☒ b. Heat exhaustion
- c. Heat stroke
- d. Sun stroke

SWEATING $\ominus$ / $+$

$> 40.5^{\circ}\text{C}$: CORE TEMP

+ altered Mentation

Differentiation of Heat Illnesses

Feature	Heat Cramps	Heat Exhaustion	Heat Stroke (Sun Stroke)
Core Temp	Normal	Normal or $<40^{\circ}\text{C}$	$>40^{\circ}\text{C}$
Skin	Moist	Cold, clammy, moist	Hot, dry
BP / Pulse	Normal	$\downarrow$ BP, $\uparrow$ Pulse	Variable, often unstable
CNS	Normal	Normal/mild headache. dizziness	Severe dysfunction - confusion, seizures, coma
Key Feature	Painful muscle cramps after exertion	Collapse with dehydration & salt loss	Life-threatening emergency

56. Which is not correct about superfetation?

- a. Fertilization of two or more ova from same cycle by different acts of coitus
- b. Fertilization of second ovum in woman already pregnant ✓
- c. Increased risk in septate uterus ✓
- d. Increased risk of fetus papyraceous ✓

57. Secondary blast injury leads to:

- a. Tympanic membrane rupture
- b. Lung rupture
- c. Burns on upper torso
- d. Puncture lacerations**

Bruises , puncture lacerations and abrasions occur due to flying debris or missiles

58. Death in electrocution occurs due to

- a. Myoglobinuria induced ATN
- b. Vagus stimulation
- c. Arrhythmia
- d. Internal organ burns

V. Fib^N

59. Air India flight crashed into a residential campus causing intense fireball. Which of the following is most likely finding anticipated in post mortem?

- a. Heat hematoma
- b. Curling ulcers
- ☒ c. Pugilistic attitude
- d. Cadaveric spasm

60. Paradoxical undressing is seen in?

- a. Hyperthermia
- ☒ b. Hypothermia
- c. Sexual fetish
- d. Joule Burns

61. Vaginal swab for determining recent intercourse can be taken up to?

a. 24 hours

b. 48 hours

☒ c. 72 hours

d. 96 hours

62. The most reliable test for detection of blood stains is?

- a. Spectroscopy
- b. Takayama stain
- c. Teichman stain
- d. Precipitin test

63. Organochlorine poisoning causes death by?

- a. Open sodium channels causing persistent depolarization
- b. Irreversible competitive inhibition of acetylcholinesterase
- c. Irreversible non-competitive inhibition of acetylcholinesterase
- d. Open potassium channels causing persistent repolarization

organochlorine

Feature	Lindane	DDT	Organophosphate
Mechanism	GABA-A block *	Na ⁺ channel prolongation *	AChE inhibition
Main effect	<u>Seizures</u>	Tremors → <u>seizures</u>	Cholinergic excess
Secretions	Normal	Normal	↑↑ (wet) ✓
Pupil	Normal	Normal	Miosis ✓ ✓
Cause of death	Status epilepticus	Seizures	Respiratory failure

64. On autopsy kerosene odor of stomach is seen in?

a. Organophosphate poisoning

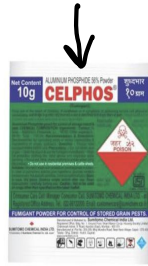
b. Aluminium phosphide poisoning

c. Calotropis poisoning

d. Cerebra thevetia

PHOSPHOGENE

Hippus
aconite



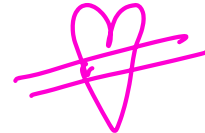
→ MADAR
CAW TROPIC'S

CAW TROPIC'S

CEREBRA

THEVETIA

Cardiac glycosides



65. All are correct about Strychnos nux vomica except?

- a. Emprosthotonus ✓
- b. Stimulation of CNS ✓
laryngospasm
- c. Preserved consciousness till death ✓

d. Presents with Lock jaw

↓
Tetanus: neonatal



66. 20WBCT is used for evaluation of?

- a. Efficacy of ASV
- b. Calculation of dose of ASV
- c. Venom induced afibrinogenemia
- d. Venom induced neurotoxicity



→ 10-20 vials ASV

67. Postmortem of vagabond shows fixed dilated pupils with odor of bitter almonds in breath and cherry red color postmortem hypostasis. Which type of hypoxia is seen in this case? *

- a. Hypoxic
- ☒ b. Histotoxic
- c. Anemic
- d. Stagnant

→ ~~CO poisoning~~

→ Cyanide poisoning

68. Which of the following drug(s) is not used for management of cyanide poisoning is?

- a. Sodium nitrate ✓✓
- b. Sodium thiosulfate + Hydroxycobalamin
- c. Amylnitrate ✓
- d. Sodium nitroprusside + Thiamine

Sodium nitrite	Induces methemoglobinemia MetHb binds cyanide forming cyanmethemoglobin Reduces free cyanide
Amyl nitrite (inhaled)	Same as sodium nitrite (MetHb formation)
Sodium thiosulfate	Acts as sulfur donor Rhodanese enzyme converts cyanide This thiocyanate is renally excreted
Hydroxocobalamin (Vit B12 precursor)	Directly binds cyanide and forms cyanocobalamin which can be excreted in urine

ethylene glycol poisoning *

69. Child consumed medicine for cough and cold dispense at PHC and same evening started vomiting and became unconscious. His urine output in past 12 hours is 100 ml and KFT is rising. Urine microscopy is shown below?

- a. Fomepizole
- b. Physostigmine
- c. Hemodialysis
- d. Amylnitrate



Calcium
Oxalate
Crystals

70. A doctor receives two summons-one to appear in court as an expert witness murder case and another to provide expert medical opinion in negligence for leg amputation with consent. Which of the following should the doctor prioritize?

- a.** Appearance in the murder case
- b. Appearance for providing medical expert opinion
- c. The summon received first
- d. The summon from court which is near to his workplace

71. A man was abducted from his home, and his son subsequently claimed rights to his father's property. As per Section 111 of the Bharatiya Sakshya Adhiniyam (BSA), until when is the son not entitled to claim inheritance?

- a. 5 years
- b. 6 years
- ☒ c. 7 years
- d. 10 years

Section 111 of the Bharatiya Sakshya Adhiniyam (BSA) deals with the presumption of death. It states:

When a person is not heard of for seven years by those who would naturally have heard of him if he had been alive, the burden of proving that he is alive is shifted to the person who affirms it.

72. In a bomb blast incident, Lung rupture and Tympanic membrane rupture would be described as?

- a.** Level I
- b. Level II
- c. Level III
- d. Level IV

Level	Mechanism	Examples
Level I (primary)	Direct effect of blast overpressure wave →	Tympanic membrane rupture, pulmonary barotrauma, bowel perforation
Level II (Secondary)	Injuries from flying debris/ fragments ✓	Penetrating injuries, shrapnel wounds
Level III (Tertiary)	Injuries from being thrown by the blast wind ✓	Fractures blunt trauma, amputations
Level IV (Quaternary)	All other effects burns, inhalation psychological	Burns, crush injuries, toxic gas exposure, PTSD

73. A 40-year-old male was brought dead after a road traffic accident. On autopsy, the following injury was noted on the face as shown in the image. What type of injury is shown below

- a. Avulsion
- b. Laceration
- c. Incised wound
- d. Contusion



74. An adult patient involved in a high-speed road traffic accident had a normal CT scan on admission but died within 3 hours. Autopsy reveals retraction ball appearance and petechial hemorrhages in the corpus callosum. What is the most likely diagnosis?

- a. Diffuse vascular injury
- b. Cerebral contusion
- c. Intracerebral haemorrhage
- ☒ d. Diffuse axonal injury

75. A man kills his office colleague and later claims he was experiencing delusions of persecution and other psychotic features at the time of the act. He now asserts that he is not guilty by reason of insanity. What is the most appropriate next step under medico-legal protocol?

- a. Refer for psychiatric evaluation to assess if he is fit for trial
- b. Enroll in an Anger management program
- c. He should be sent directly to jail
- d. Declare him not guilty and release immediately

76. A 68-year-old female presents with breathlessness, declining health, and is found to have multiple metastases. She is awake, alert, and visibly anxious. The medical team assesses that aggressive chemotherapy, radiotherapy, ICU care, and mechanical ventilation would not improve her condition and may cause harm. Despite this, the patient's daughter insists on pursuing all possible life-prolonging measures, including ICU admission. What is the most appropriate next step for the physician in managing this case?

- a. Convene a family meeting and consider the patient's values, preferences, and goals of care
- b. Admit the patient to ICU and initiate aggressive life-prolonging treatment
- c. Discharge the patient and shift to home-based palliative care(HOSPICE)
- d. Start on Placebo treatment

THANK YOU