

HANDWRITTEN NOTES

DAMS



DERMATOLOGY

CRISP, CONCISE, CONCEPTUAL

Integrated Edition





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HOW TO MAKE BEST USE OF NOTES?

A Message by Mentor Duo Specially for you,



- Read the notes thoroughly, they are absolutely **concise, crisp & conceptual** and hence it is best advised not to add a lot of extra information to them as that will dilute the quality.
- Images have been provided alongside to aid in better understanding and also help you solve image-based questions, these images have been specially picked by the faculty so have a high probability of being asked in exams.
- Notes are handwritten in a way to help make them easier to retain, a lot of tables, graphs and algorithms have been used to simplify the learning.
- While reading notes try and use the **CFAQ technique** —
 - A. Use the C to denote concept part in the notes and ensure you are clear with this part in the first go if not then it's advisable to listen to this part of the video from your course.
 - B. Use the F To denotes facts in your notes, it is okay if you can't remember them in first go but will need repeat reading. But these facts are important for exams as they could be integrated to clinical questions.
 - C. Use A to denote applied parts, this is how concepts and facts are asked indirectly in exams. This will also help you develop MCQ solving skill.
 - D. Use Q to denote areas where faculty has said it's a direct question or a PYQ or a potential question.
- This technique will help you summarize your notes In way that your second reading will become easy and faster.
- Active space has been provided with these notes to make your own annotations alongside and this will help you maintain one single notebook for one subject.
- Try and solve MCQs with every topic from DQB. Your goal should be to start with at least 30 MCQs every day and then increase to at least 50 MCQs every day. Also, when you do a topic wrong write it alongside the notes that this topic needs to be read again but mark only the specific area that you have done wrong not the whole topic.
- After the topic is covered then in the active space try and summarize the topic in the form of mind map. This will help in active recall and make your revision easier.

Best Wishes & Happy Learning!!!!



DERMATOLOGY

STRUCTURE OF SKIN

- EPIDERMIS
- DERMIS
- SUBCUTANEOUS LAYER (hypodermis)

Functions - Acts as a **barrier**

- Prevents the entry of microorganisms
- Prevents water loss
- Prevents heat loss

MNEMONIC -

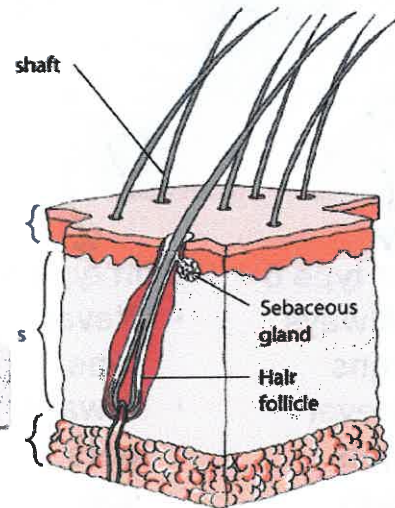
Come - Stratum **c**orneum

Let's Stratum **l**ucidum

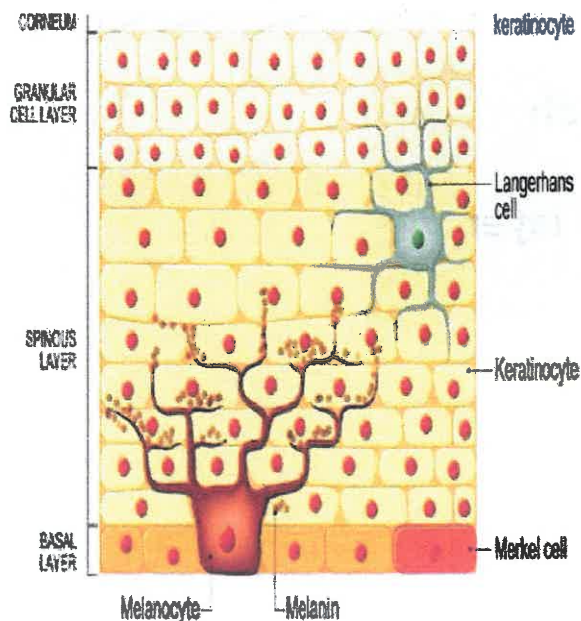
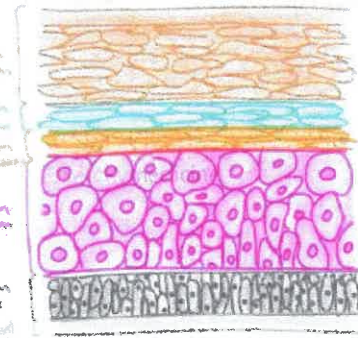
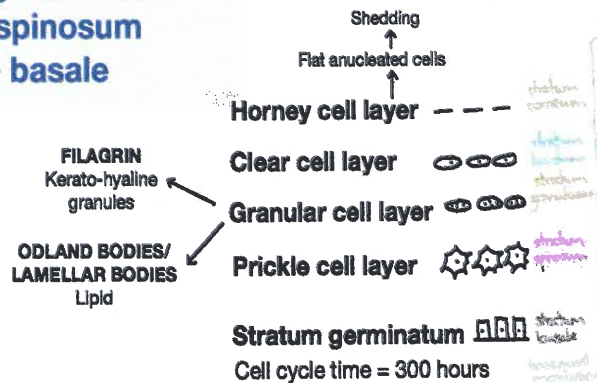
Get - Stratum **g**ranulosum

Sun - Stratum **s**pinosum

Burn - Stratum **b**asale



Epidermal turnover time:
8 weeks (56-72 days)



Keratinocyte - 90%

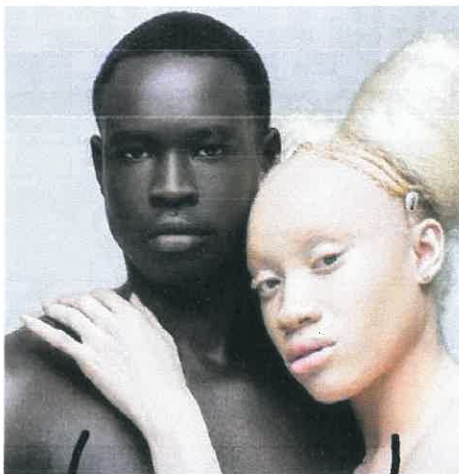
Epidermis

Langerhan cell
Antigen presenting cell

Melanocyte
Pigment producing cell

Merkel cell
Touch receptors

MELANOCYTES



Skin type 6

- Always tans
- Never gets sun burnt

Skin type 1

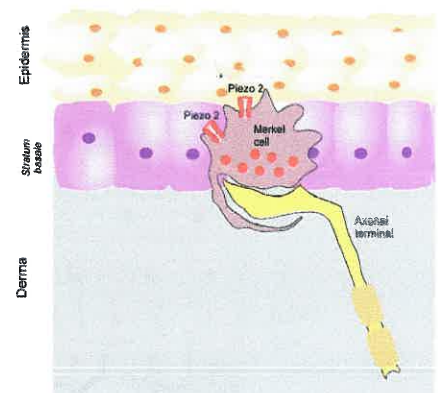
- Never tans
- Always gets sun burnt

- Pigment producing cells
- Derived from **neural crest cells**
- Located in **stratum basale** layer
- 1 Melanocyte → 36 keratinocytes
- Indian skin = Type 4

Melanocyte count - same
Melanin - different

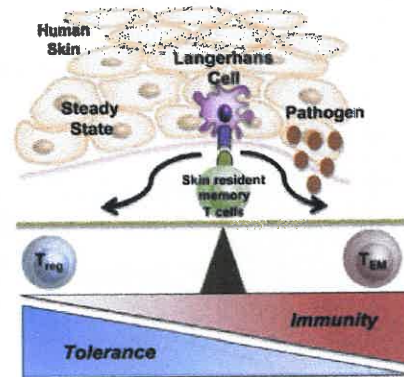
Merkel cell

- Slow adapting type of Touch receptors
- Located in stratum **basale** layer
- **Ectoderm** derivative

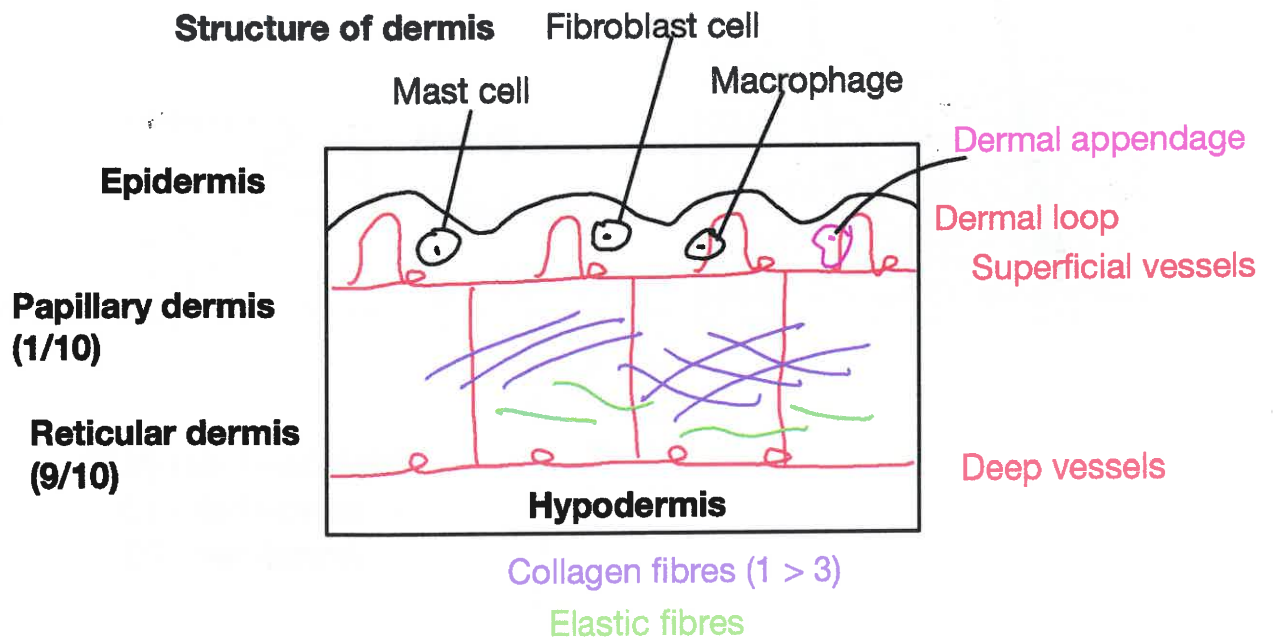
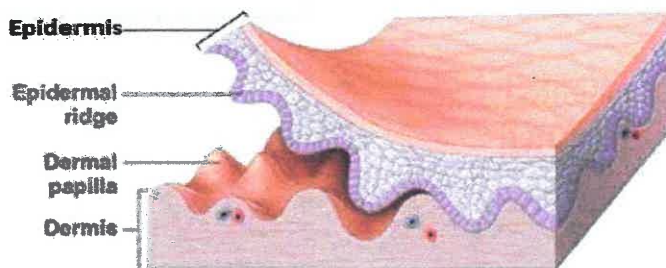


Langerhan cell

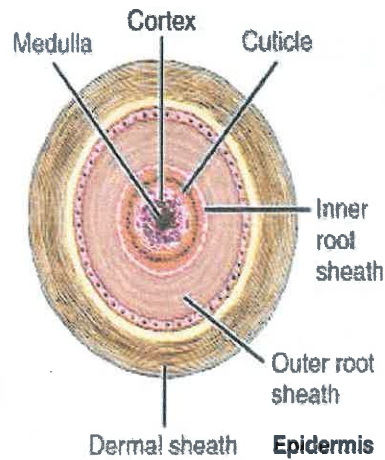
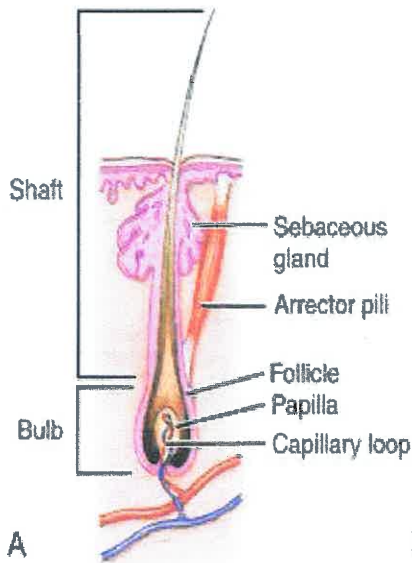
- Antigen presenting cell
- Located in stratum **spinosum**
- Derived from **mesoderm**



DERMO-EPIDERMAL JUNCTION



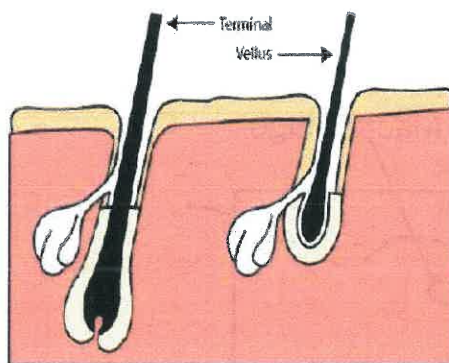
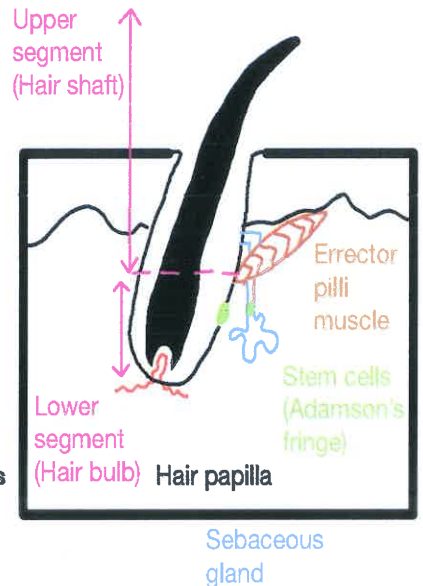
HAIR ANATOMY



LANUGO

VELLUS

TERMINAL

Intra uterine hair
(On Fetal skin)Thin, short
(Mid dermis)Long, thick
(Subcutis)Non-pigmented
Non-medullatedNon-pigmented
Non-medullatedPigmented
Medullated

Inner root sheath

H	H	IRS
E	U	C
N	X	U
L	L	T
E	E	I
Y	Y	C
		L
		E

Cuticle

Medulla

Cortex

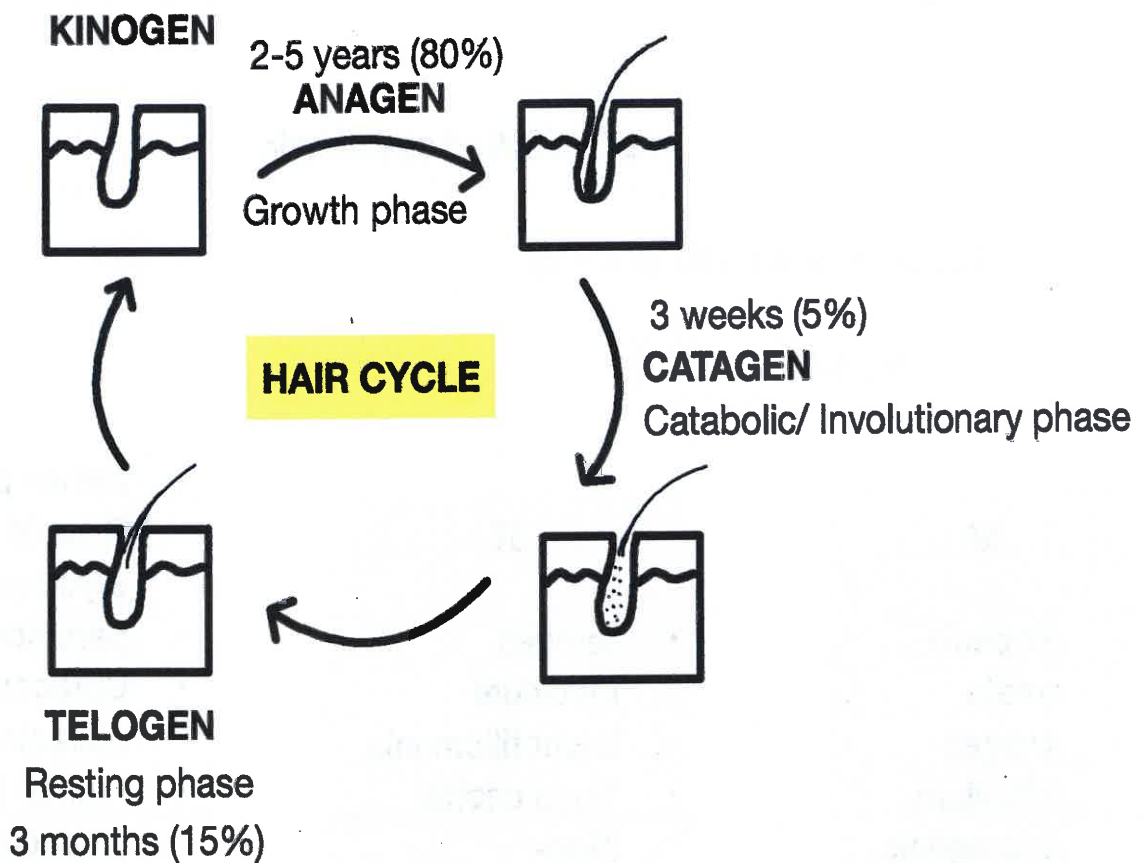
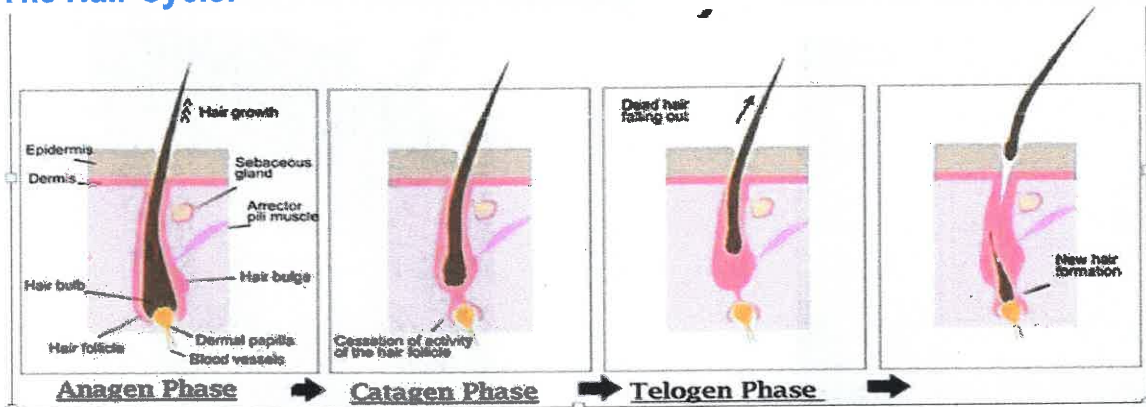
Outer root sheath

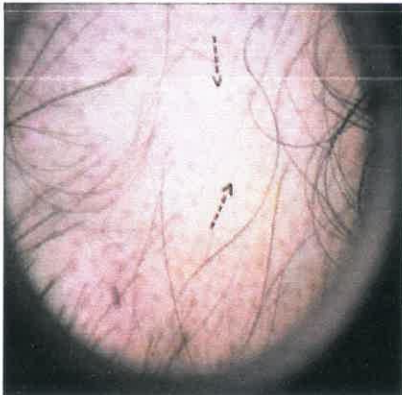
Dermal sheath

Medullary index (M:C)

- Human hair - 1:3
- Animal hair - 1:2

The Hair Cycle:



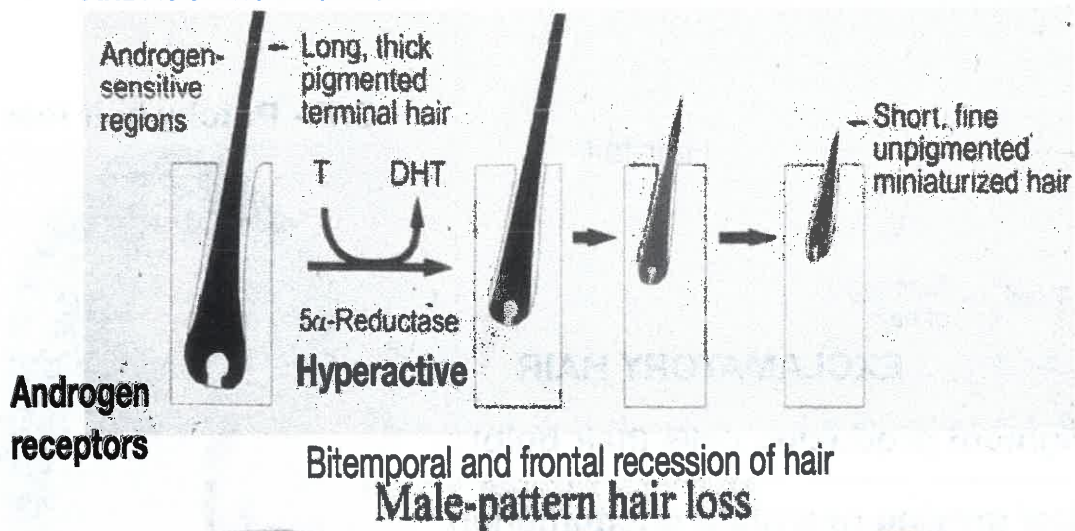
NON SCARRING ALOPECIA**Empty hair follicles****SCARRING (CICATRICAL) ALOPECIA****Scarring is present****ALOPECIA - Loss of hair****Not associated with scarring****Associated with scarring****NON-CICATRICAL****CICATRICAL****3A**

- Alopecia areata
- Anagen Effluvium
- Androgenic Alopecia

3T

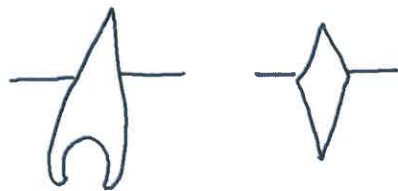
- Telogen Effluvium
- Trichotillomania
- Tinea capitis (Non-inflammatory)

- Lichen planus
- Discoid lupus erythematosus
- Sarcoidosis
- Cutaneous metastasis
- Frontal fibrosis alopecia
- Tinea capitis
- Pseudo-pelade de Brocq

ANDROGENIC ALOPECIA**HAMILTON & NORWOOD CLASSIFICATION****Female-pattern hair loss****LUDWIG'S CLASSIFICATION****Rx**

- Topical Minoxidil
 - 2% - Females
 - 5% - Males
- Oral Finasteride (5 α reductase inhibitor)
- Oral Cyproterone acetate (anti-androgen)

ALOPECIA AREATA (Autoimmune T lymphocyte mediated)



Peribulbar T cell
collection

Tapering
of hair

C/F -- DERMOSCOPY --

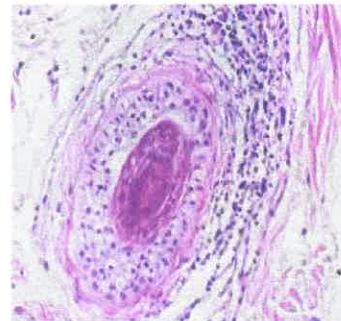
EXCLAMATORY HAIR

Target - Pigment producing cells (hair bulb)

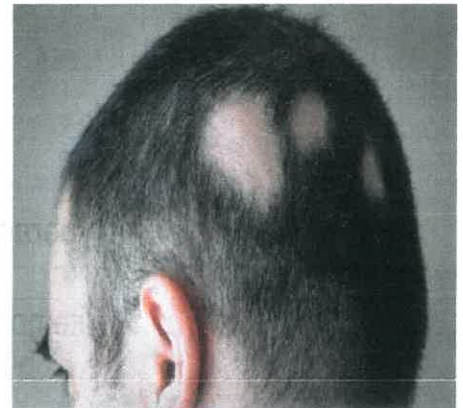
Going white/ greying overnight phenomenon

**Biopsy-
Swarm of
bee
appearance**

PATHOGENESIS :



C/F - Patchy hair loss



Nails changes - Geometric/ uniform pitting of nail

Rx - Intralesional steroids

Types of Alopecia areata

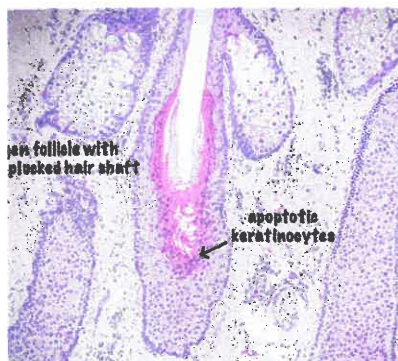
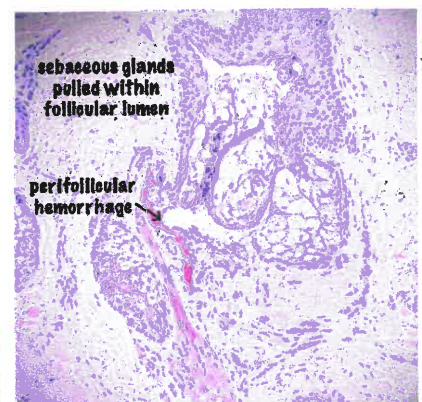
- 1) Alopecia totalis - Loss of complete scalp hair
- 2) Alopecia universalis - Loss of complete loss of scalp hair + body hair
- 3) Ophiasis - Loss of hair from posterior scalp margin
- 4) Sisaipho - Loss of hair from anterior scalp margin

Trichotillomania:**Pulling of hair**

C/F - Multiple broken hair of variable length on alopecia patch on accessible sites

Biopsy - Perifollicular and intra follicular haemorrhage (Hamburger sign)

Friar tuck sign - Sparring of marginal hair

**Histopathology**

Effluvium - Shedding of hair

TELOGEN

Acute stressful event

(COVID, Typhoid, Dengue, Malaria, Childbirth)

- Premature cessation of Anagen phase
- Excess hair in catagen — — telogen
- Excess hair fall after 3-4 months

ANAGEN

Cancer chemotherapy

- Bind to rapidly dividing cells
- Break the anagen hair
- Excess within hair fall within weeks

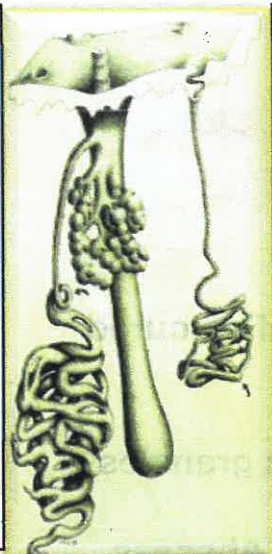
SWEAT GLANDS

ECCRINE GLAND

ATRICHIAL

Present all
over the body
except
mucosa

Thermo-
regulation
(since birth)



APOCRINE GLAND

EPITRICHIAL

Present on
axilla, groin,
aerola

Olfactory
communicati
on (after
puberty)

DEFECT OF URINE & SWEAT GLANDS

HIDROCYSTOMA



Cystic
swelling
around eye

SYRINGOMA



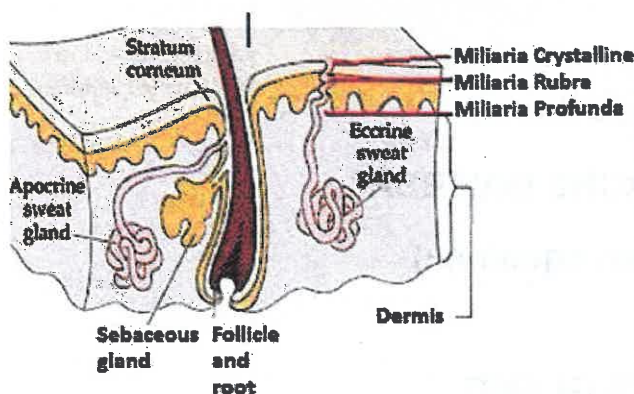
Multiple papules
around eye

NEH

Neutrophilic
eccrine hidradenitis



MILIARIA-Occur due to either obliteration or disruption of the eccrine sweat duct.



St. Corneum - M. crystallina
St. Malpighian - M. rubra
D-E junction - M. profunda

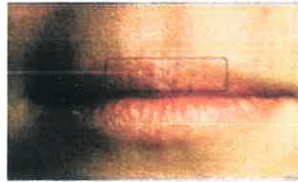
DISORDERS OF APOCRINE GLAND

BROMHIDROSIS

Secretion of foul smelling sweat

Poor local hygiene

Bacterial overgrowth



CHROMHIDROSIS

Secretion of coloured sweats

Lipofuscin granules

**Nodule → Abscess
→ sinus →
Fibroblast →
Comedone**

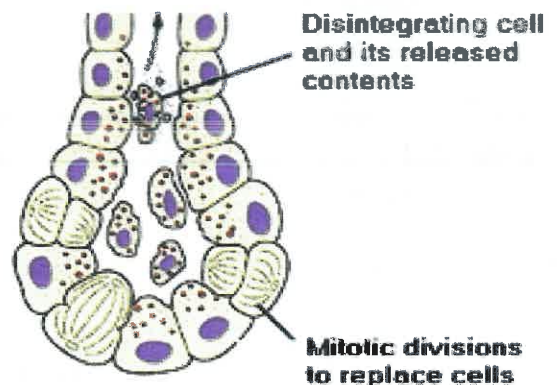
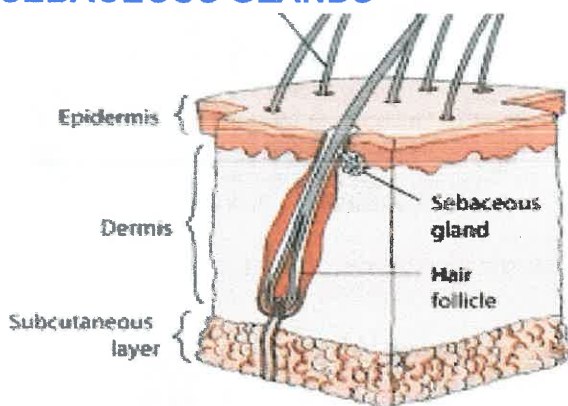
FOX-FORDYCE DISEASE

Apocrine miliaria

**C/F - itchy papules in axilla, groin
More in Females**



SEBACEOUS GLANDS

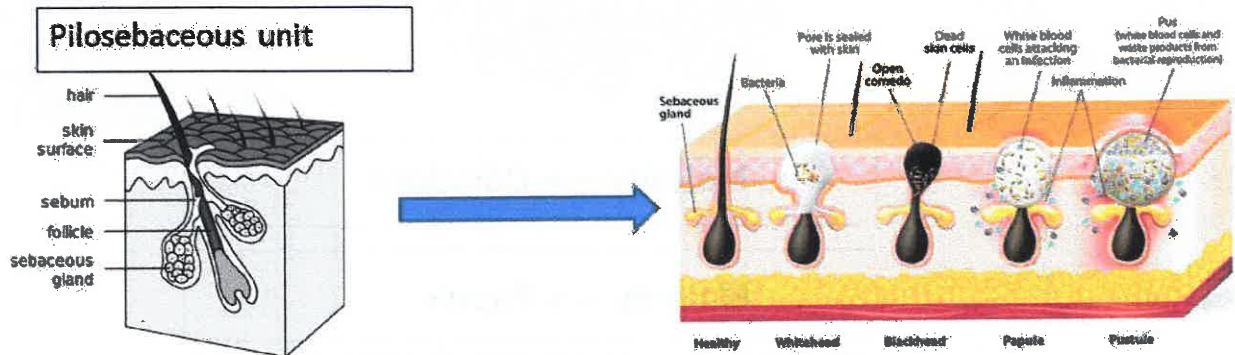


HIDRADENITIS SUPPURATIVA/ ACNE INVERSA

(Sebum → Cholesterol, wax ester, squalene)

ECTOPIC/MODIFIED SEBACEOUS GLAND

1. Fordyce spot - lip
2. Tyson's gland - penile shaft
3. Montgomery tubercles - areola
4. Meibomian gland - eyelid

Acne vulgaris**1. Obstruction of hair follicles
(hypercornification of duct -
COMEDONE - Grade 1)**

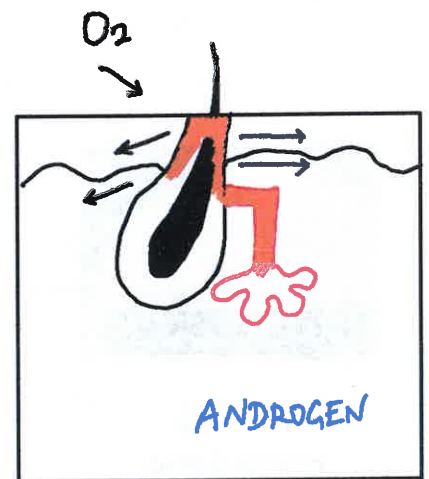
White head - closed comedone

Black head - Open comedone

Rx of choice - Topical antibiotics

**2. Proliferation of bacterial (PAPULE -
Grade 2)**

**Rx of choice - Keratolytics
Topical retinoids- Adapalene**

**3. Recruitment of inflammatory cells
(PUSTULE - Grade 3)**

**Rx of choice - Oral antibiotics
Doxycycline >> Minocycline**

**4. Rupture of hair follicles (NODULE,
CYST - Grade 4)**

**Rx of choice - Oral retinoids
Isotretinoin**



Grades of Acne



1. Grade I :

Majority → Comedone

2. Grade II :

Majority → Papule

3. Grade III :

Majority → Pustule

4. Grade IV :

Majority → Nodule + Cyst



**Closed
comedone**



Pustule



Nodule + cyst

Side effects of Isotretinoin

- Strict 1-3 month contraception after stopping the drug (TERATOGENICITY)
- DISH - Diffuse idiopathic hyperostosis
- Pseudotumor cerebri
- Photosensitivity
- Alters LFT
- Dryness

Maximum cumulative dose - 120-140 mg/kg

Excoriate/ manipulate the acne



Acne Excorie

VARIANTS OF ACNE

Nodule-cystic acne on face and trunk
Rx - Isotretinoin



Acne conglobata

Occupational acne - oil industry



Chloracne

**C/F - Monomorphic
acne (only comedones)**

Hydrocarbon of chlorine

ACNE CONGLOBOTA + Inflammation = ACNE FULMINANCE

Rx of choice - Oral steroids

Drug induced acne

- P - Phenytoin**
- I - Isoniazid**
- M - Methyl cobalamine**
- P - Progesterone**
- L - Lithium**
- E - EGFR inhibitor**

Syndrome a/w acne

- S - Synovitis**
- A - Acne**
- P - Pustulosis**
- H - Hyperostosis**
- O - Osteitis**

- P, A - Pyogenic arthritis**
- P - Pyoderma gangrenosum**
- A - Acne**

- S - Seborrhea**
- A - Acne**
- H - Hirsutism**
- A - Androgen alopecia**

- H,A - Hyper androgenism**
- I,R - Insulin resistance**
- A,N - Acanthosis nigricans**

Middle aged individuals**ROSACEA****Redness on the convexity of face****Etiology:****Desmodex**

- Abnormal blood vessel wall
- Sebaceous gland proliferation

Aggravated by:**Sunlight, exercise, emotional disturbance (angry), smoking, alcohol, hot spicy food****Erythema-Telangiectasia****Papule-pustular****Phymatous rosea****Ocular rosacea****Rhinophyma
(Potato nose)****Blepharitis****D/d - Malar rash of SLE****Rx of choice - Doxycycline/ Metronidazole**