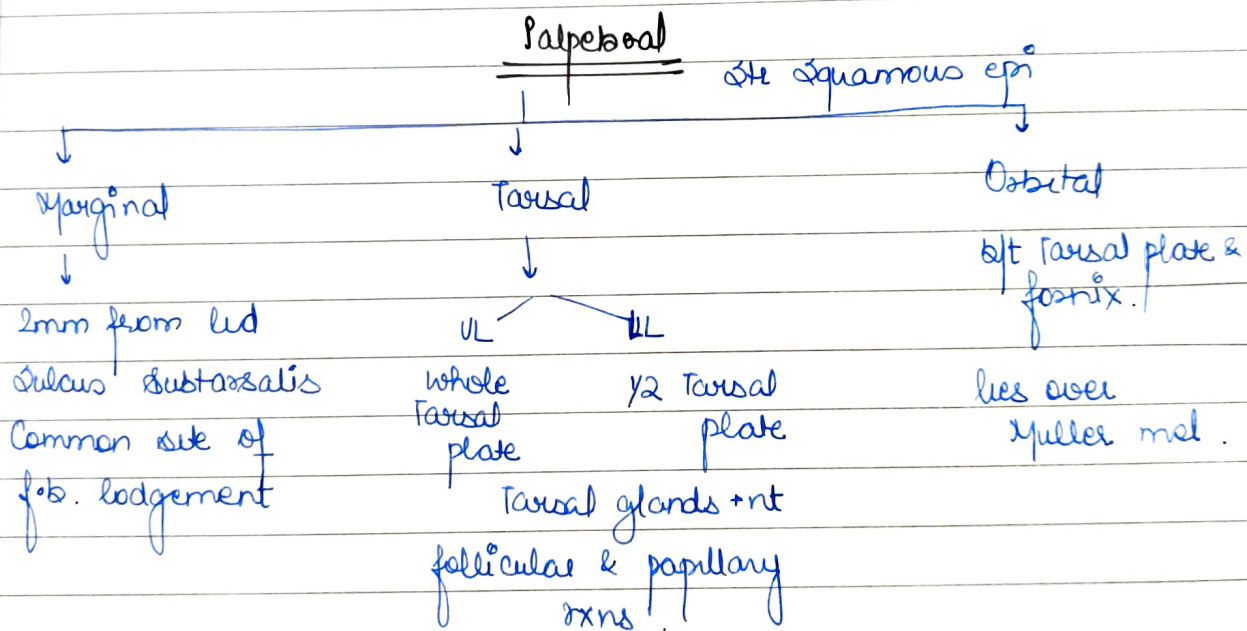
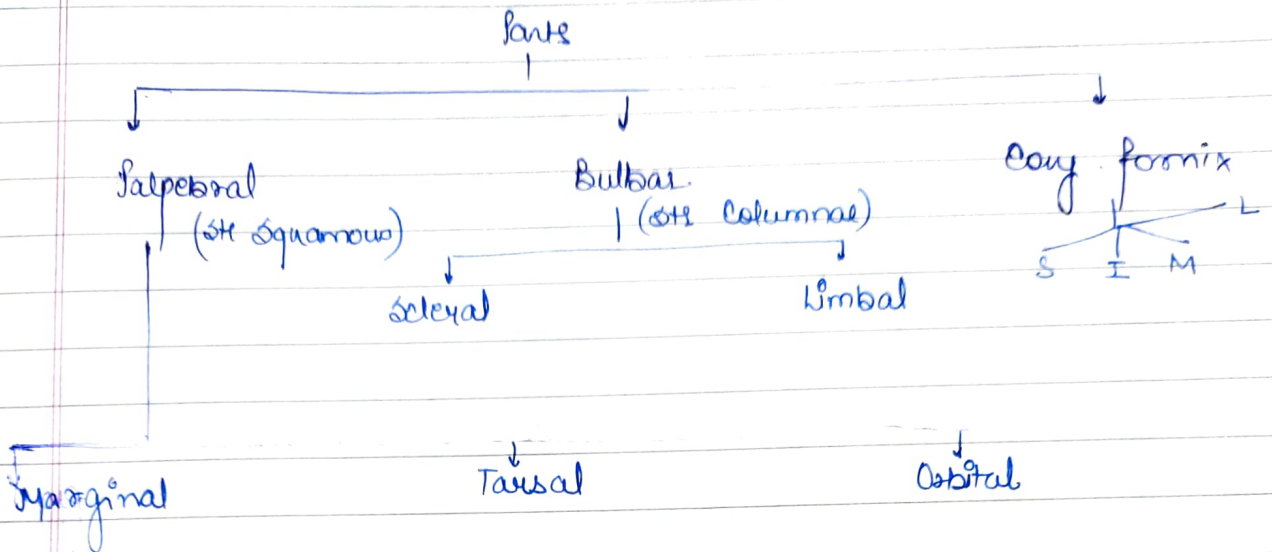


Conjunctiva

To join

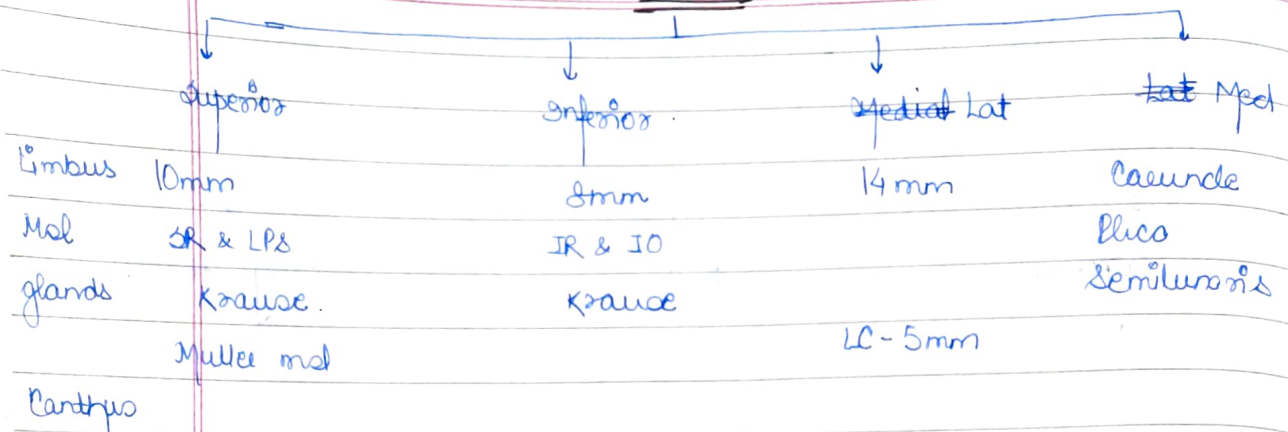
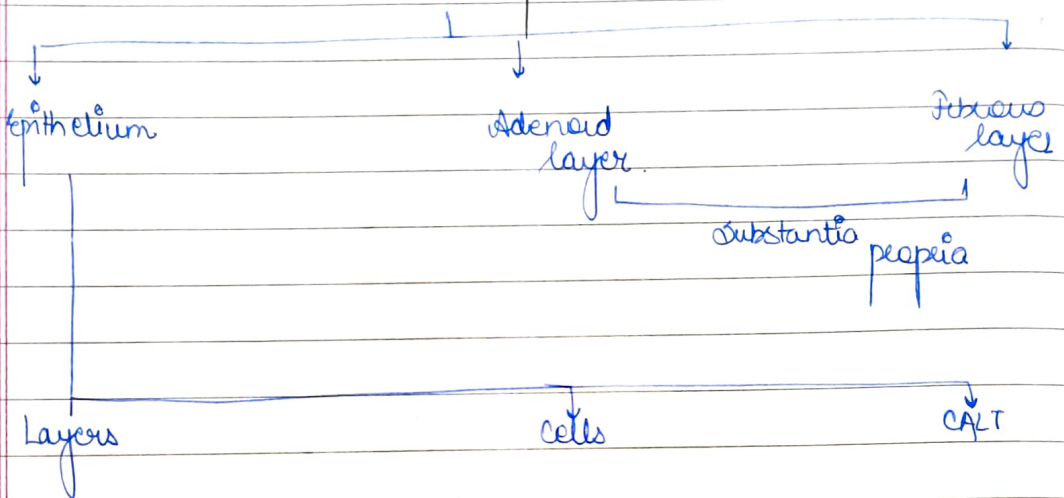


Bulbar

str. Columnar epi
Att 1mm post to SC Limbus

3mm ridge around Cornea = Limbal Conj

Here Tenon & episcleral tissue firmly attach
∴ firm hold of eyeball during ocular sx

FornixMicroscopic Structure

- Marginal - 5 layered
Non keratinised str. Sq.

1° - Sq

2-4 - Polyhedral

5 - Cylindrical

↳ Goblet Cells

Follicle crypts - Tarsal
Bulbar

Lacunal gland
Tear film
canals

↳ Melanocytes

Limbus
Fornix
Caecule

Site of entry of
Ant. Chlamydia

• Tarsal - 2 Cylindrical
Cubical

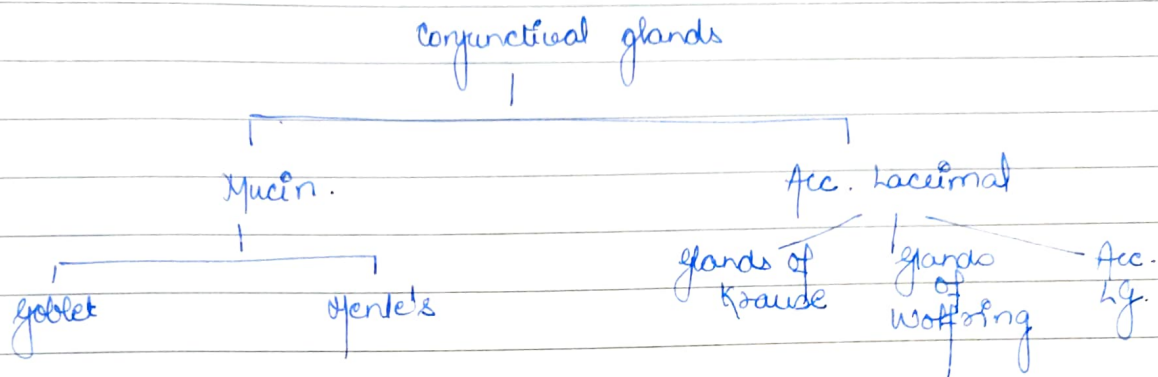
• Fornix & Bulbar - 3 - Cylindrical
Polyhedral
Cuboidal

↳ Langerhans Cells
Igg

• Limbal - Palisades of Vogt
germinative zone for cancer

↳ C. Stem Cells

Adenoid layer - Plicae
in birth $\therefore$ x follicles in infants
after 2-3 mth



Conjunctivitis

Inflammation of Conjunctiva

Types

→ Acute

→ Chronic > 4 wk

→ Neonatal

Based on Onset

- Acute
- Subacute
- Chronic

Type of Exudate

- Serous
- Catarrhal
- Purulent
- Muc-P
- Membranous
- Pseudomemb

Conj Response

- Follicular
- Papillary
- Granulomatous
 - Fungal
 - Parinaud Ogs
 - TB
 - Syphilis
 - Sarcoidosis

Etiology

Infectious

Non Inf

Bact

Virus

Chlamydial

Fungal

Parasitic

→ Allergic

→ Irritant

→ Endog.

→ Dry Eye

→ Toxic

→ Atelectasis

→ Scler.

Staph A.

H. Aegyptius

N. gonorrhoeae

St. pyo.

Moraxella Lacunata

Proteus

Klebsiella

E. Coli

Diphtheroids

HSV

Adenov

Picornav

→ Coxsackie

→ Enterov 70

Myxo. (Measles)

Paramyxo

→ Mumps

→ New Castle

Moll. Cont

Chlamydia

→ Trachoma

B-K

→ Ac Inclusion

L1-L3

LGV.

Aspergi

Candida

Nocardia

Leptothrix

Sporothrix

Actinomyces

Rhino.

Staphgonorrhoea

Org	Staph aureus Gram +ve Coagulase activity	Neisseria Sun shape Gram -ve Diplococcus WBC & Epi cells
MOT	M by discharge	Genital Inf few hrs - 3 days
clp	Pusule, MP. Contagious Blepharitis, eczema, Impetigo Cataractal Inf of mucous mems Gums lids → morning Pink eye . . . conj congestion. Flakes of Mucopus in fornicies Coloured haloes In - → chemosis, small ecchymoses M, PM, Hypopyon, Sitis	Severe purulent + <u>Cornea</u> fever UL overhanging LL Swollen Eversion difficult Deep sed & velvety Palp C Membr ✓ Pain ✓ Pre-auricular LN Papillary thickening = Uethrosis Corneal Ulcer (Marginal) Discharge accumulates in sec of cleaning - Hyperacute / Acute gonorrhoea. Adults, ON in newborn
Ix	discharge or scraping Gram, Giemsa, PAP Inclusion bodies in cells	Conj scraping Single Exam!
Complicat ⁿ	o @	Corneal Complicat ⁿ - Cause of Blindness Sitis Perforation of cornea y. Aethrosis Endocarditis Septicaemia
Mx	A+B - Blood spectrum A+B out x Steroids Topical Syst - Supp - x Bandaging x Spread as Contagious	Topical & - 10% Arg + warm saline shly A+B. Cycloplegics - of Cornea Systemic & - 1g Ceftriax i-m Skin Consultat ⁿ & Co-existing Chlamydia Inf

Membr & Pseudomembr

Corynebacterium diphtheriae.
 Strep. Staph.
 Haemophil. E. coli.

Membr - SJS, EM

Signed - ↓ severe, chronic form of
 recurrent Pseudomembran
 Pinf. form. & fibrin rich PM = wood
 like consistency

• ~~membr~~ • Fibrinous membr
 Ld swell, sup discharge
 white membr peels off x bleed - PM
 severe - brownish Ld. Exudates in conj
 bleed ✓ - M
 • Membr. • Beau's Line • Cornea
 ulceratⁿ • Sympthraea.

Angular.

Moraxella lacunata - diplo bacillus
 ↓ by Strep
 Thick rods
 Gram neg
 resist to drying
 Epi macerating

Nasal tract → Hard → Hardly

Soritusⁿ Eyes, dirty white foamy discha
 Reddenⁿ of conj. » Intertriginous sti
 » Canthi. Hypemaes.
 Blepharitis. Clear, shallow ulcers
 Hypopyon. Relapses ✓

Penicillin - 10,000/ml freshly made
 drops

Ans - 4000-10,000 U 12mg

Strep - Local - Penicillin/
 Syst Bactecin

Tetracycline Oint 2-3 times/day
 x 10-14d.

Swimming Pool C.

Chlamydia

diag.

Trachomatis

ABC - Trachoma

B-K - Acute Inclusion

mos

Sexual, ♀ → ♂

Mild blepharitis, Cicatricial
Water in swimming poolsInclusion Acute. Incub 5-10D.

Follicular hypertrophy LL

Exudate - » Neutrophils

"SPK + Pannus like vascularization"

EKC.

Adenovirus 8, 19, 3, 7

Contagious, Epidemic

Follicular Conj

Pre-auricular LNopathy

Conj - PE → Serpith opacities on
= photophobia

Ix

Direct smm of st of smears using
monoclonal Ab.

NAA using PCR

NA hybrid ELISA, Giemsa

MC Egg cell Culture

Immunofluorescent test

Demonstration of ↑ IgG titres in
bld.

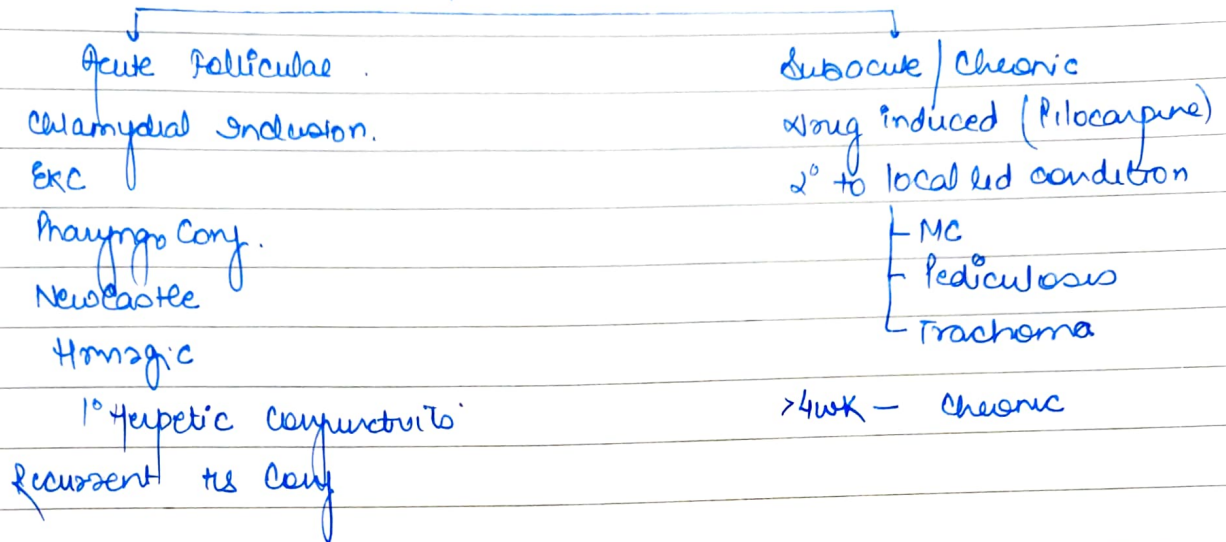
Rx

Eye Dnt tetracycline 50/100
Azithro Eye dropsTab Teta 250mg bday
Dox 100mg BD
Erythro 250mg BD | 14dMild decongestive
Lubricant drop
A.O.B.

X Acyclovir

Viral Conjunctivitis

Serous, clear, watery discharge

Follicular — Herpes, Adenov

co

Pharyngocory fever
Adenovirus 3, 4, 7

Herpetic fever

HSV

Young children

Contagious from carrier

Be-auricular erythema

Corneal vesicle → dendritic finger

cf

Acute follicular conj
Pharyngitis, fever, beauricular Adeno
2 - epidemic form
Corneal - superficial, fine, punctate
keratitis manifesting as epitheliopathy

New Castle

PCF diseased fowls

Fluorescent Ab tech

↑ Serum Ab titer

Isolating virus by culture

Hemagic Conj

Picornavirus - Cox-Sackie

Apello Conj

Enterovirus 70

Pandemic

Violent inflam Conj = lacrimatⁿ
photophobia

Subconj Hmg

enlarged beauricular LN

Topical lubricant - Artificial tears

6-6 times/day

Acyclovir 3%

Valacyclovir 3%

TFT 1%

5 times/day

TRACHOMA

Egyptian Ophthalmia

Prevalence - Endemic Eastern Mediterranean, Middle East
Major cause of blindness

Eti Chlamydial trachomatis ABC
Chloro
Prokaryotic
Obligatory intracellular
C. trachomatis
psittaci

Risks - Age - 2
♀, Unhygienic, crowded
♀

C/F Symptoms - O. Irritation, f.b sensation & discharge. Pain, lacrimation. photophobia, blurring, severe loss of vision.

Signs Conj. Congestion, papillary Enlargement. Follicles Upper Conj.
Trachomatous follicle → Lower fornix → Upper
forming a row in upper margin of tarsus
→ Palpebral
Cicatization of follicle - Minute stellate scar

Cornea - Superficial keratitis → flour stain Upper cornea
T. pannus - Lymphoid "infiltrat" = Vasc of margin of cornea U>
Heiber's pit → follicle like infiltration
Deep vessels - Eft Bowman Membr & Epi
later stroma

Progressive Pannus - // vessels directed vertically downward
Regressive "

Corneal ulcers at advancing edge of pannus. shallow.
If Bowman destroyed then permanent opacity

Cause/Prognosis

Page 5

Mild, symptomless
cicatrization UTareal

2. *H. aegyptius*
gonioides

acute, incapacitating condition
gross c. sequelae
Blindness

sequelae

Pannus — Corneal Ulceration — Distortion of eye

T. ptosis - drooping of UL - dense infiltratⁿ, sleepy appearance
 ↓ tarsus
 scaling
 fibrous → Entropion → Trichiasis → Tylosis

diagnosis

Micro of test using pooled antigen

Culture in irradiated MC Cay Cells - costly

Monoclonal Abs direct test

IgA - IPA light microscopy test

Diagnostic Center

- Follicles > Upper palpebral Conj
 - Epithelial Keratitis >> Upper Cornea.
 - Pannus " "
 - Herbert's pit (Limbal Infiltrates)
- [+ Stellate Trachomatous Scarring in Conjunctiva
 Linear Conj scarring of Upper tarsus
 2 of above + Photo Exam + Culture.

GAZDO

Complicatⁿ -

SED, Trichiasis, Entropion, Keratitis, C. Scarring,
Superior fibrovascular pannus, H. pt
Bact subconj.

C. Ulcer

Classification

(a)

Mac Callan

Stage I before clinical symptoms
Immature follicles sup tarsus
SPK
Pannus.

II Lesion typical — Scar tissue
florid supertarsal follicular rxn C

IIa — Mature follicle

IIb — Marked papillary hyperplasia
Pannus + Herpes — Corneal subepi inf

III — Scarring + follicle — Active inf

IV — Scarring — Upper tarsus — Quiet

WHO — FISTO

TF Follicles — Active — $\checkmark$ — Scar > 0.5 mm dia on upper tarsal plate. Papillae $\pm$
P. Cong. Bld vessels $\checkmark$
Recovered — $\times$ scar.

I Intense Severe — Urgent — F + P $> 50\%$. Palpebral Cong vessels cannot be seen.
Serious Complication

S Scarring Old / inactive

T Trichiasis $\checkmark$ Corrective Sx

T. Cong. cicatrization with white fibrous bands

at least 1 Trichiasis eyelash

O Opacities Previous trauma
Visual loss

Opacity in pupillary region.

R

Surgery for C. Entropion & Trichiasis

A.B.

Facial Cleanliness

Envision smps.

A.B	—	Tetracycline	1%	TDS	x 1mth
		Argithro	1%	QID	2wk.
			1gm.		

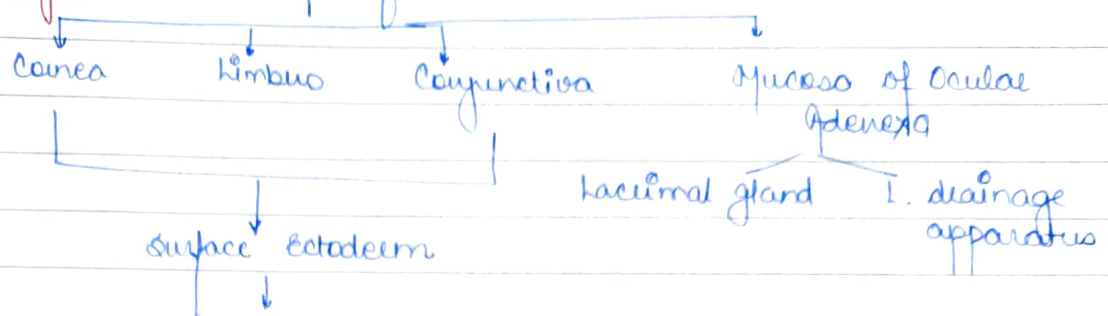
Parinaud Oculoglandular Syndrome

Unilateral conjunctivitis — follicular

ipsilateral preaur

O&NAnatomy

- Ocular Surface



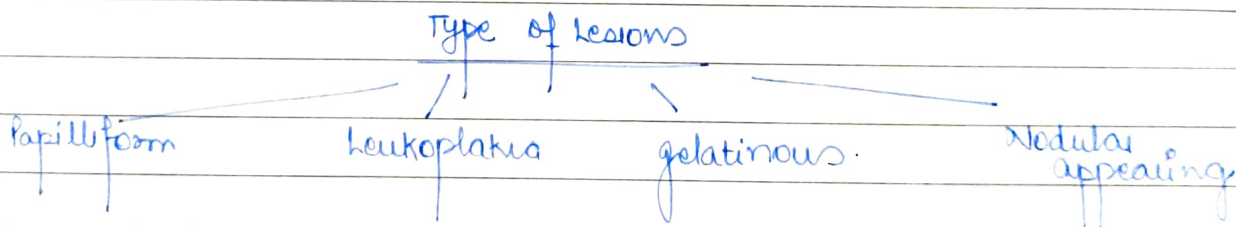
Stratified ← Squamous

Squamous - superficial cells $\hat{=}$ flattened nuclei which periodically sloughs off into tear film.

definition - Ocular surface Squamous Neoplasia refers to spectrum of benign, pre malignant & malignant, slow ~~grow~~ progressive epithelial lesions of Conj & Cornea.

Field dysplasia — CIS — Invasive Sq. Ca

Term coined by Lee et al from Austria in 1995



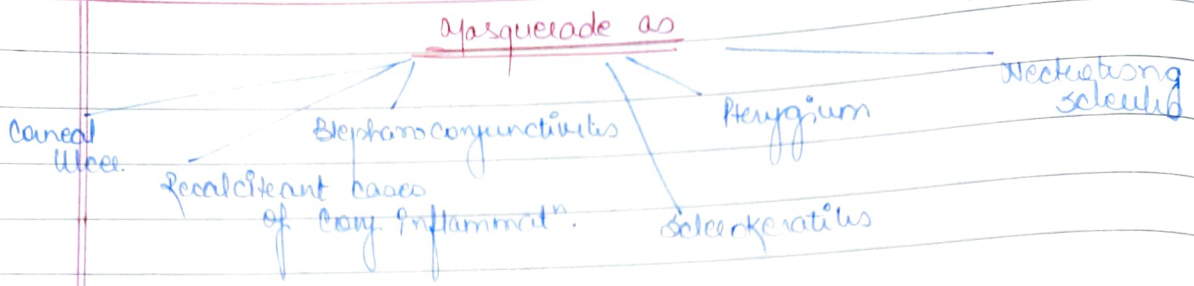
2.0 → Pterygium - Triangular fleshy mass starting on sclera but often goes on to invade the limbus & cornea.

Symptoms - f.b sensitⁿ.

Irritation

Redness

Elderly $\hat{=}$ predictⁿ for cs limbus.



Conj. mass — location clock hrs, limbal
size.
Extension into Cornea
Type of lesion.
Healed vessel - ?

Tech of taking sample No touch technique avoiding direct manipulation of lesion by holding. Healthy conjunctival tissue is employed to prevent tx seeding into new area

Wide Sx Excision keeping 2mm clear Margin.
Cryo to edges & base — Double freeze thaw technique

HPE

Post-op — Tx for Antimetabolic Rx.
 — Size $\times$ 3 clock hrs
 — Wide Excision $\leq$ free margins not possible
 — Topical AB $\leq$ steroids (tapering) $\times$ 4wks

Pathological findings — full thickness dysplasia of epidermis with an intact BM.
 dysplastic area — Mitoses & pleiomorphic

hyperchromatic nuclei

Risk factors

Advanced age

Male gender

Exposure to solar UV light

Immunosuppression.

Infection $\subseteq$ HIV.

$\subseteq$ HPV-16.

Complicatⁿ

— Local Infiltratⁿ.

Mets.

Late Dx

— Extensive Dx

Exenteration.

Presence of feeder vessel + $\uparrow$ Index of suspicion + Elderly pt

DSN

Rx

dosage —

IFN

1.2 million IU QID continuously

— costly

— has to be reconstituted

— plasma

— PCR

— Recurrent pleysium

✓ Mitomycin C —

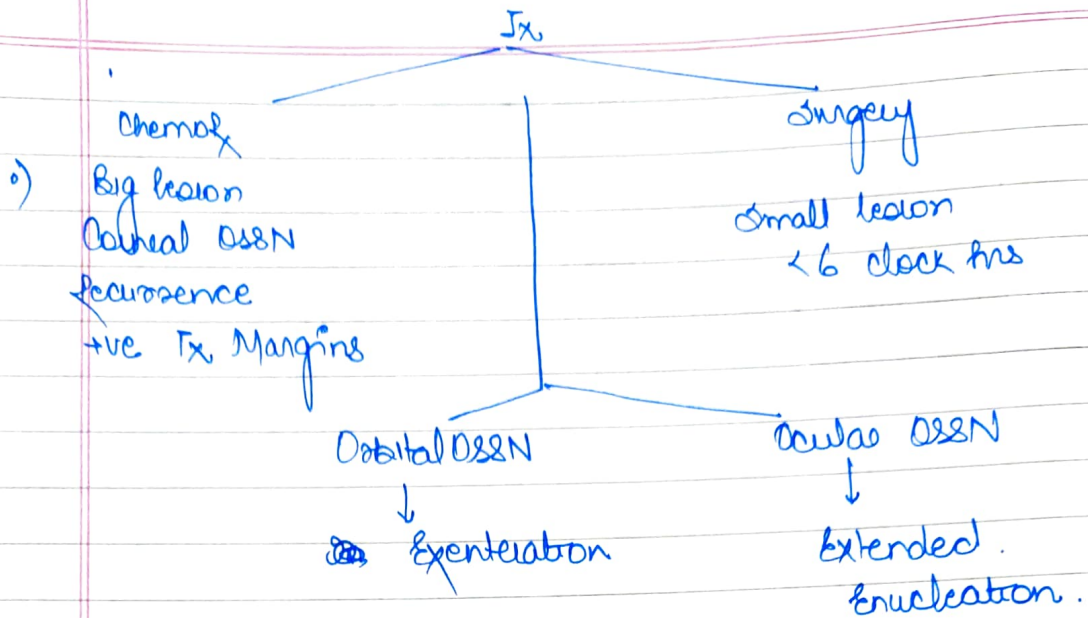
0.02% QID.

3 wks give 3 week off

SFU $\rightarrow$

1% QID

1wk give 3wks off



→ features of Corneal OSSN.

- mottled ground glass sheet appearance
- fimbriated borders
- Convex leading edge spreads in an arc away from limbus
- ↳ Apical

↳ ASOCT feature — epithelial thickening
→ Sudden transition at epithelium level at limbus

↓
Pterygium — Subconj. lesion.

on next pages

Pterygium

fibrovascular, wing shaped encroachment of conj. over cornea on nasal side

Progressive - thick & fleshy, vascularized
Stationary - thin, papery, dry, pale

young adults

Risk factors

signs of Conj - dust
heat
sunlight
Hot winds

HPE - Elongated deg. of collagen tissue of stroma of Conj.

Pterygium grading

Tan's grading

grade I - Episcleral vessel visible
II - obscuration
III - Complete

Pterygium

Pseudopterygium

- Adhesion of Conj to Cornea
- Can occur in any location
- Non Progressive
- Can pass rod under the Conj

dx of Pterygium / Limbal Mass

- Pseudopterygium
- Limbal Dermoid
- Phlyctenular conjunctivitis
- OSSN
- Conj lymphoma
- Nodular scleritis / sclerokeratitis

Mx of Recurrent pterygium

- Metastatic 1° Ex using CAG tech
- Manage only recurrence using -:
 Topical steroid
 Sub conj injection of SFU
 Anti vegr
- Repeat Ex using MMC applicatⁿ & ARG
- PERFECT
- PER Mini SLET.

Pingecula

innocuous condition

yellow white deposit on Cery ady to Limbus

Impression CytologyIntroduction

- Egbert et al in 1977 for studying goblet cell

Principle

- Applicatⁿ of Cellulose acetate filter paper to ocular surf for collection of superficial layers lining ocular surf

Analysis

Molecular

Histological

Immunohistological

Indication

OSSN

KCS.

Dry Eye Syndrome

Vt & def
stem cell def.Tseng's modified method
of collectionTechniquePt preparation.

- Anaesthesia (0.5% proparacaine) may or may not be used
- Wipe off excessive tear

Specimen collection

- Cellulose acetate paper of 0.22 mm is trimmed in D-shape

Apply on conj. surface

↓
stain

PAS

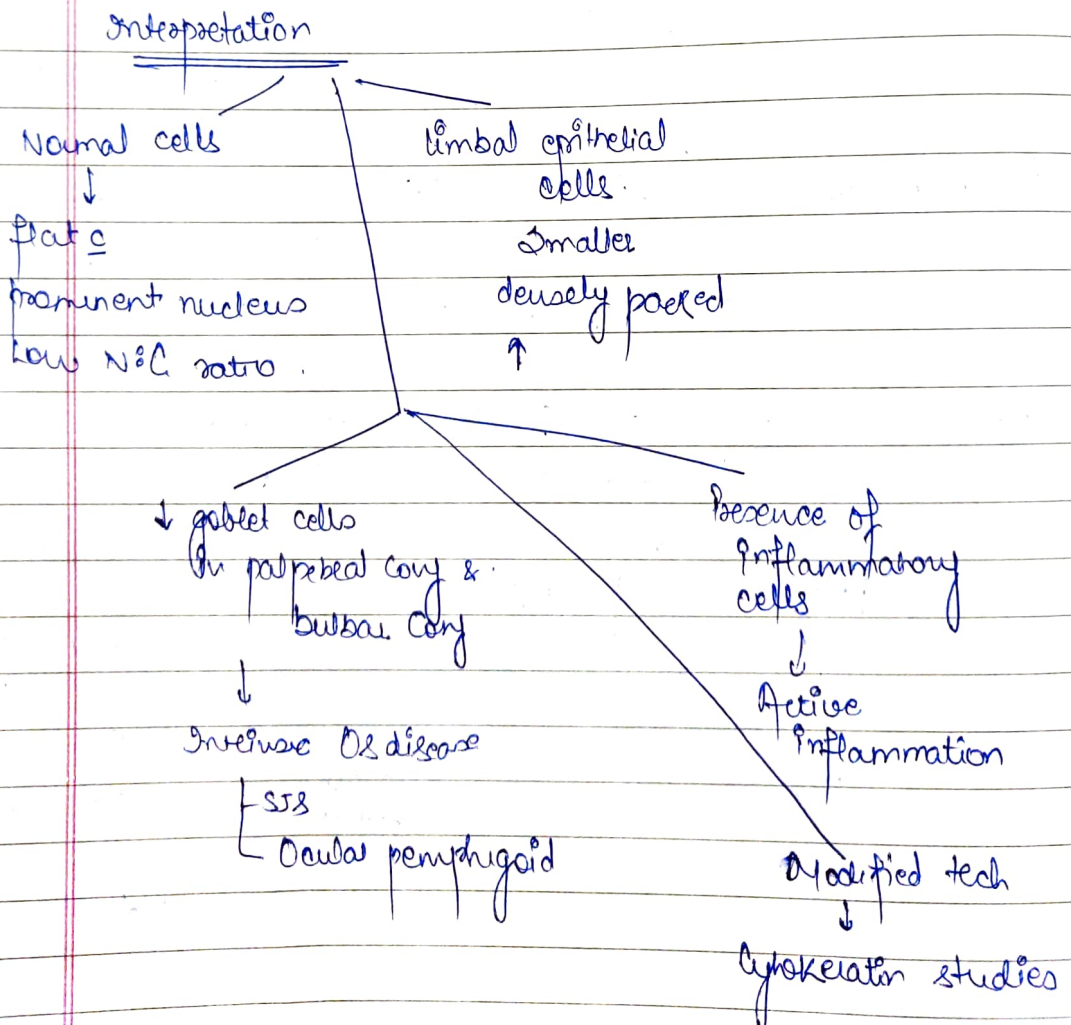
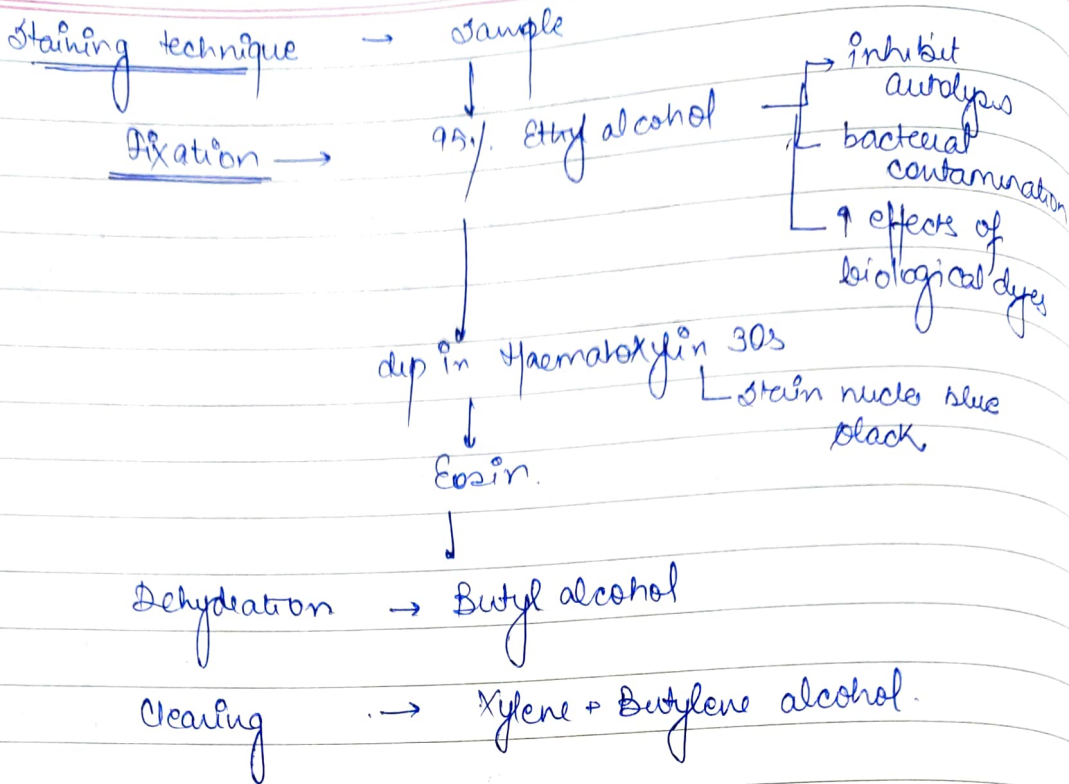
Haematoxylin
(Gill's)

Other

- modified orange G
- Scott's tap water substitute

Nucleocellulose memb

if immunohisto to be done

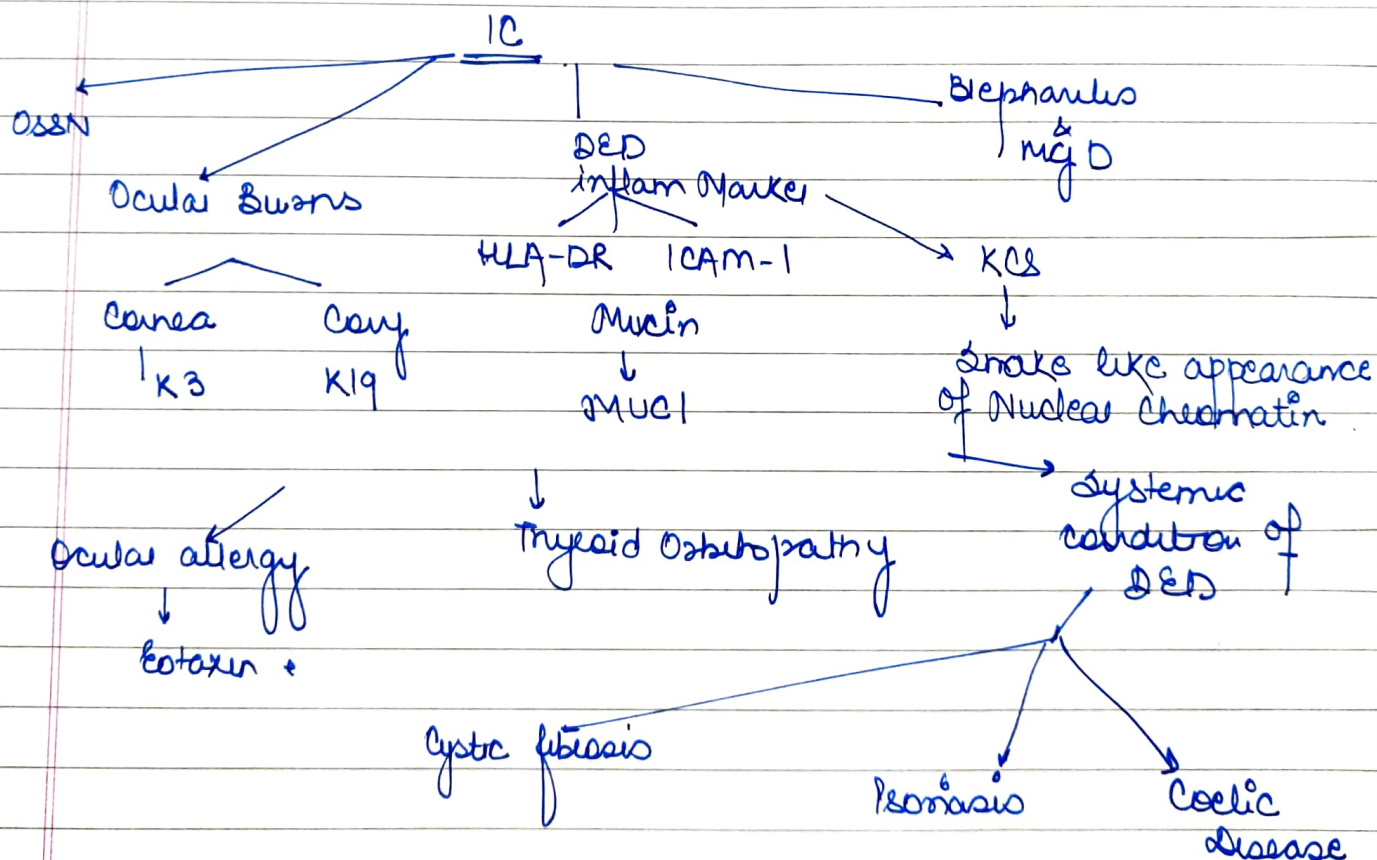


Advantages.

- Ideal method to Dx OSD.
- Simple to perform & non invasive
- Causes min discomfort to pt
- Multiple samples can be obtained in one sitting

Limitations

- time consuming
- Not routine tool.
- Require expert team.
- Cannot diff b/t. dysplasia & invasive carcinoma.



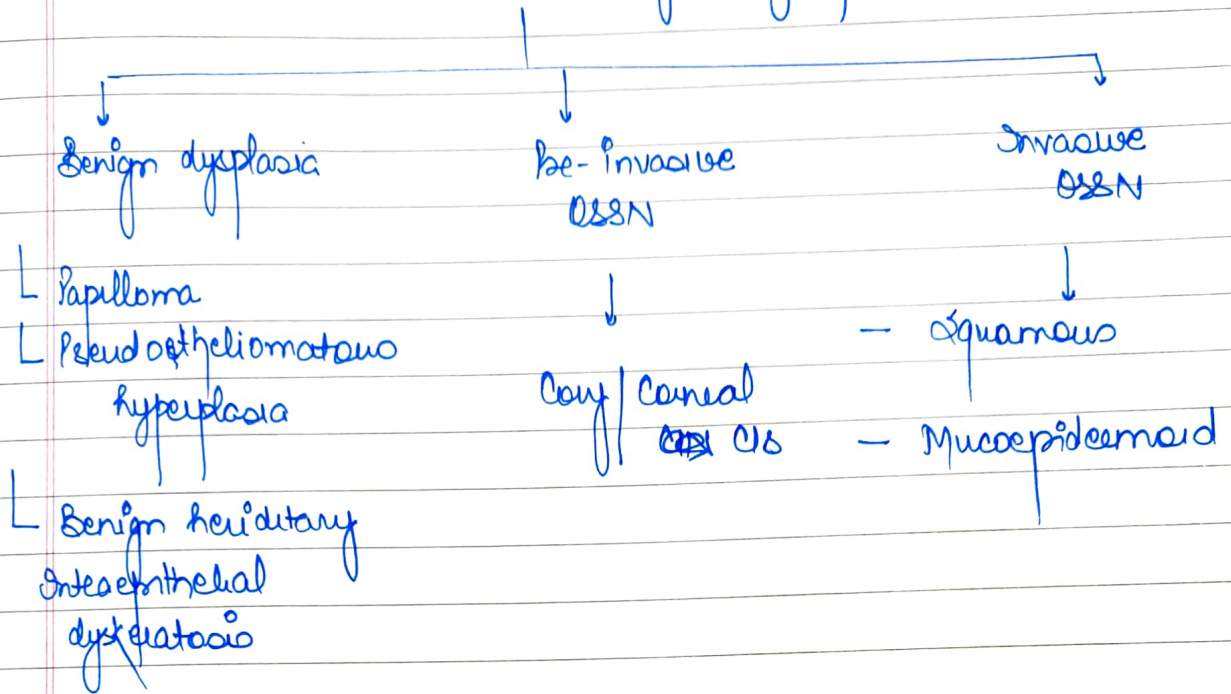
Nelson classification of squamous Metaplasia

0
>500 goblet cells/mm²

1-2
100-500
small cell
large Nuclei

3
<100
] ultra.

Lee & Hirose's grading of OSN



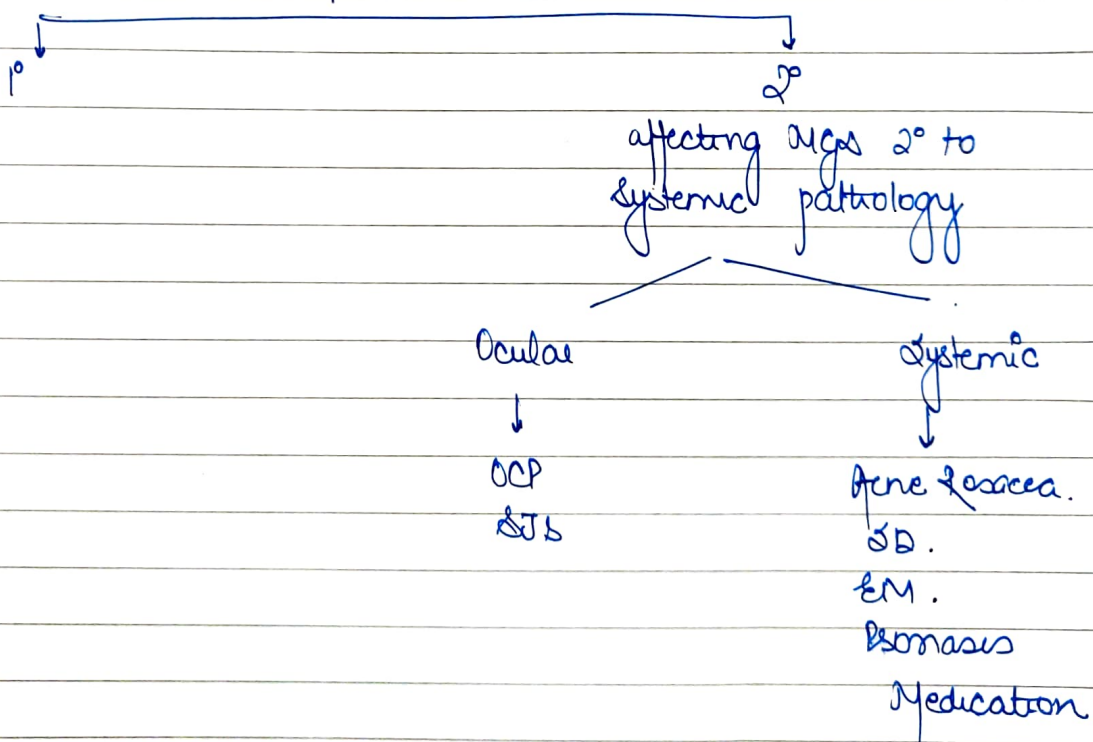
Meibomian gland dysfunction.

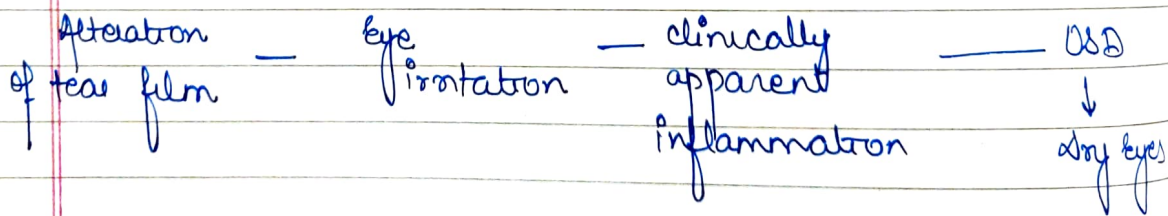
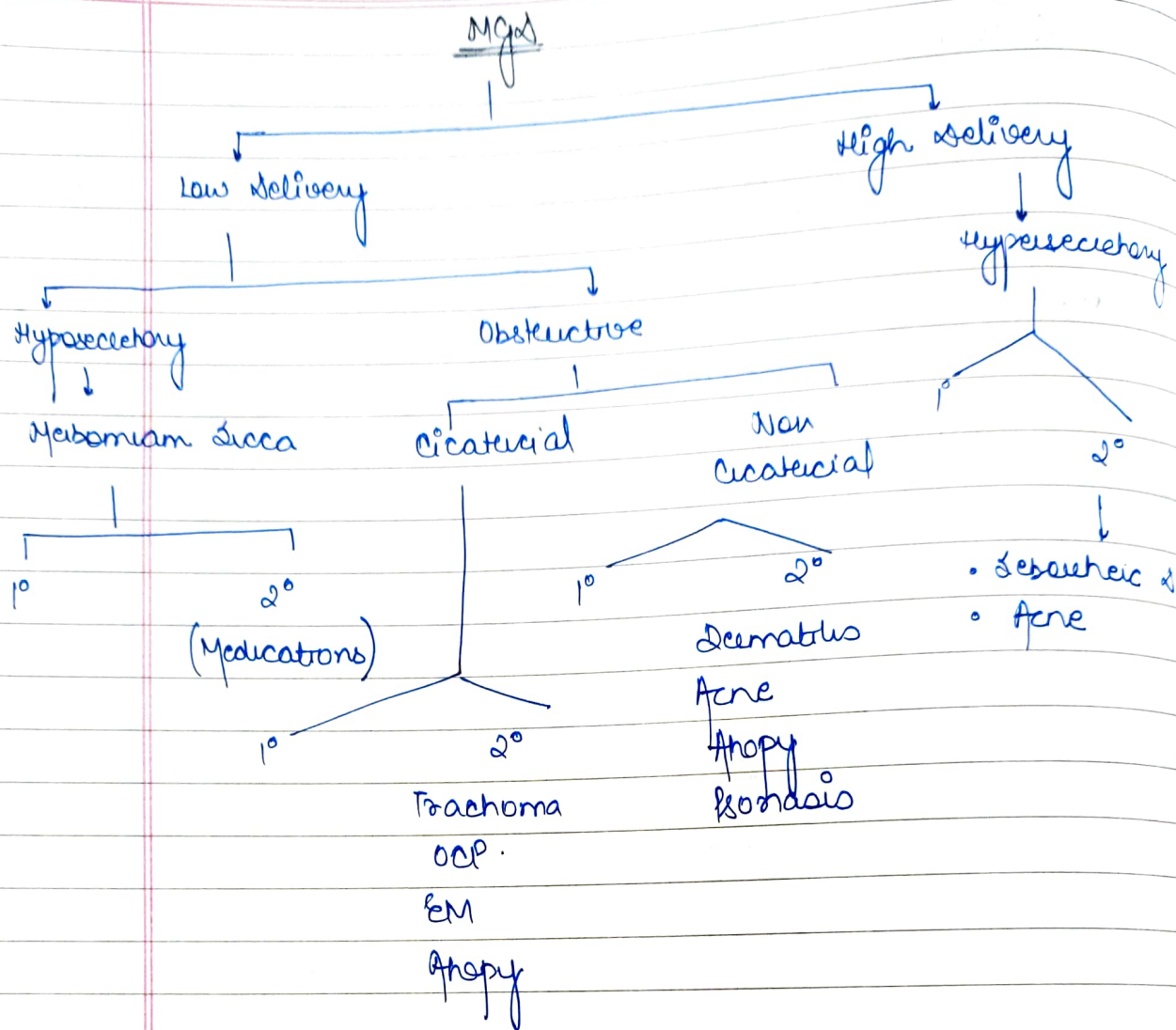
Definition → disease of MG characterized by its diffuse involvement with alteration in quantity & quality of its secretion, which may or may not be associated with terminal duct obstruction.

Altered secretion characterized by -:

- ↑ in Viscosity
- Altered colour - yellow / white
- Turbid secretion
- Flethy "
- Tooth paste like secretion
- Capping of MG duct

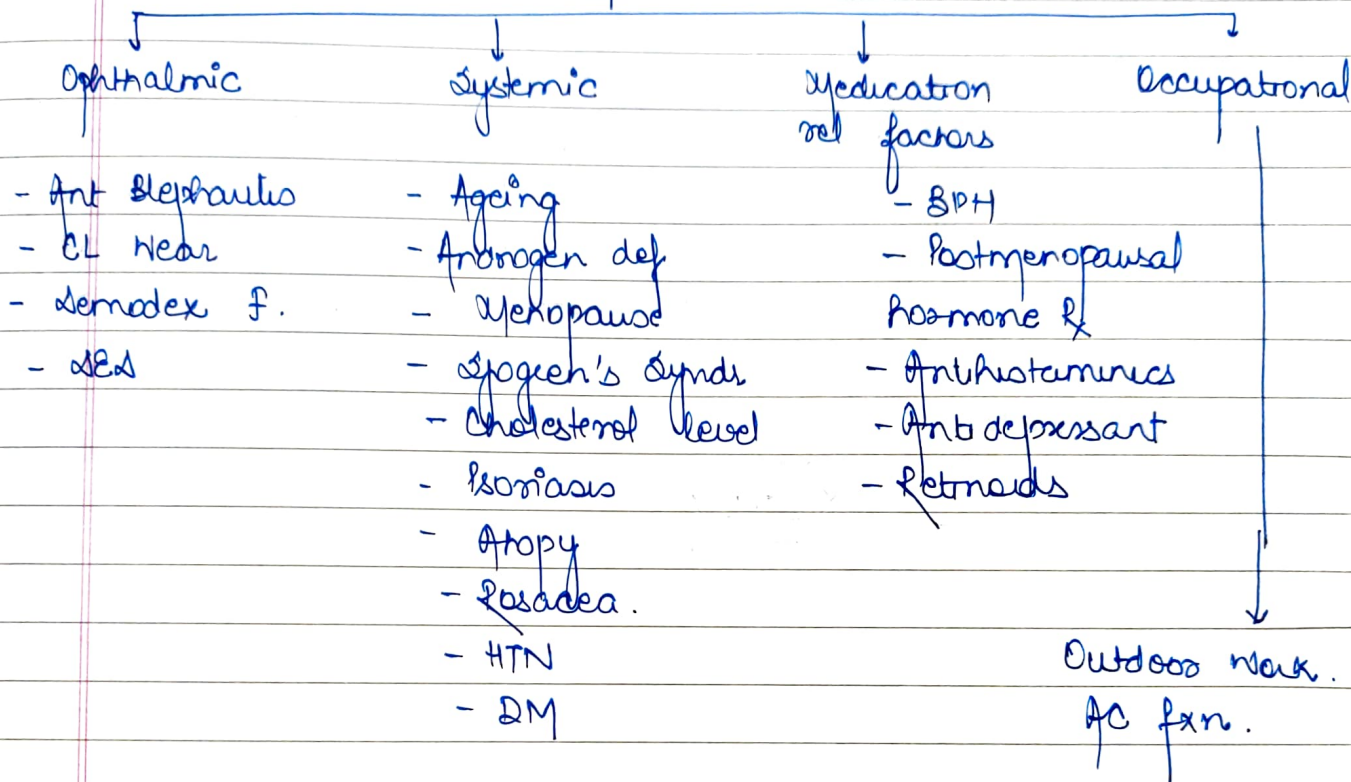
Classification





Epidemiology

31.7% In Indians

Risk factorsAnatomy

Modified sebaceous gland in Tarsal plate

UL

LL

30-40

10-20

Densely Innervated

Meibum

× Androgen, Estrogen, Progesteron,
 Retinoic Acid, growth factors

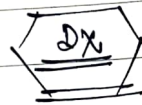
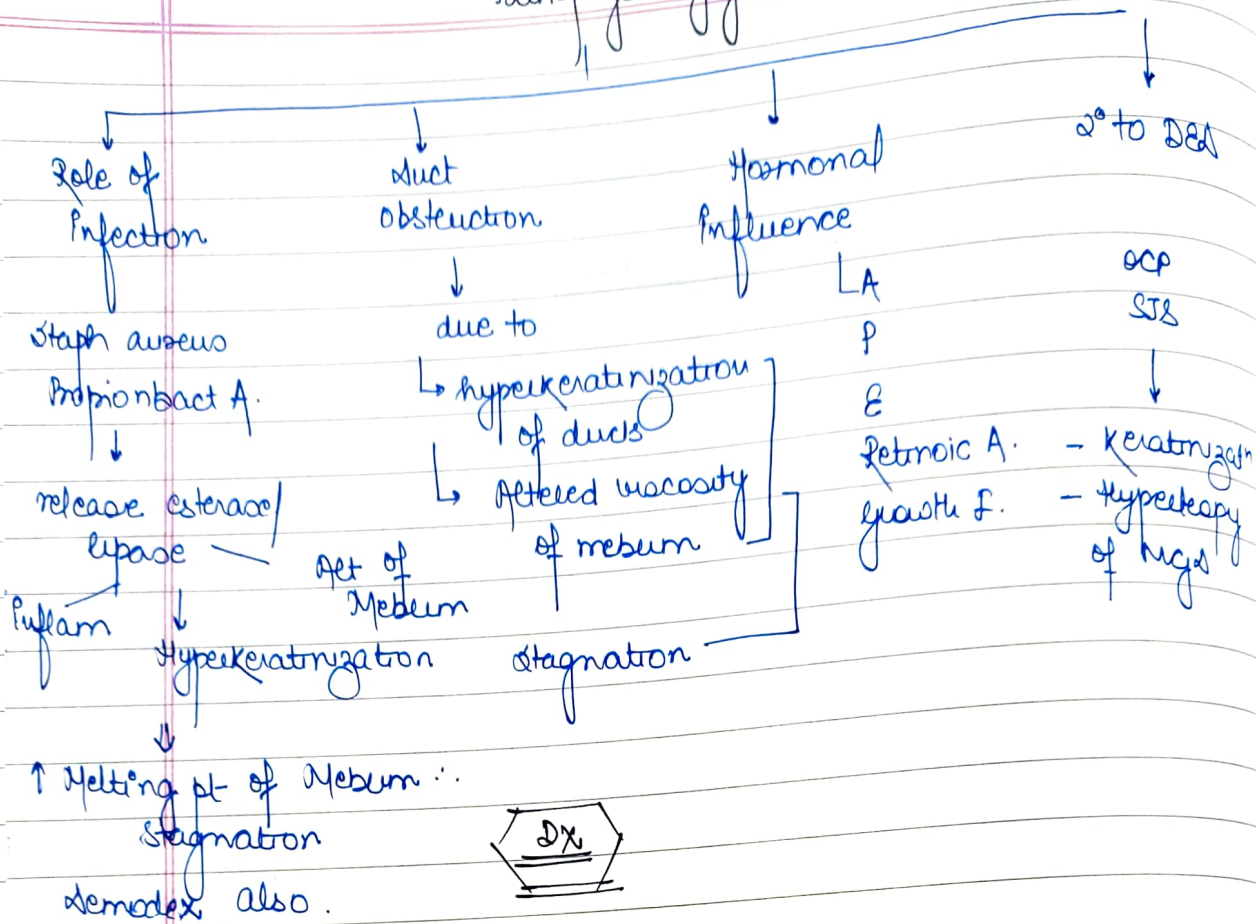
Meibum

Polar

Non Polar lipid

Preventing Evap of tear film.

Pathophysiology

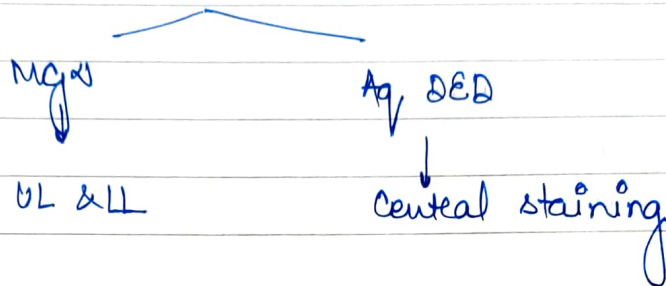


Slit lamp Exam

- Assessment of Blink rate & Inter Blink Interval
L 14-18 times/min
- Exam of Eyelid & Margins — Tarsus, Entropion, Ectropion, Trichiasis, Distichiasis
- Assessment of tear film — Normal TMH $> 0.25\text{mm}$
- TBUT — $> 10\text{s}$ (N) < 10 — dry eye
Bt x diff day @ mgs & DED

- Mq expression — clear, cloudy, toothpaste like
- Ocular Surface staining — Lissamine — Conjunctiva

National Eye Institute Scoring
Bjstervald grading



- Schirmer test — $< 5 \rightarrow$ Ag, DED
Evaporative — Reflex as $\downarrow$ Tear production.
- Meibography — Auto ref.
- Interferometry based — Yokoi dry eye grading system
- In Vivo Confocal Laser microscopy —

Ix

Routine

- Symptom Qs
- Blink rate & interval
- TMH
- Tear Osmolality
- OPI
- Grading of C/C staining
- Lid exam & expression
- Meibography
- Schirmer test

Specialized

- Interferometry
Lipiview
- In vivo Confocal
microscopy

a) Measurement of Blink Interval $\rightarrow$ No. of blinks / 1 min

$$BI = \frac{60}{\text{Blink rate}}$$

$$OPI = \frac{TBUT}{BI}$$

$OPI < 1 \rightarrow$ Cornea

b) Tear Meniscus Height (TMH) $\rightarrow$ 0.2 - 0.3 mm
 [slit lamp
 Also by OCT

c) Tear film Osmolality

Normal	Mild	Moderate	Severe
275 - 300	300 - 310	320 - 335	350

TBUT →

lipid layer dis.

on last page.

Mx of MGs

- a) Conventional Treatment — Warm Compresses
 $40^{\circ}\text{C} \times 2\text{min}$ rpt 2min
 Total 4min

BA

Lid Massage

- Traction of LC
- Down & Up moveⁿ.

- Pinching of UL to LL.
- Spatula underneath lid



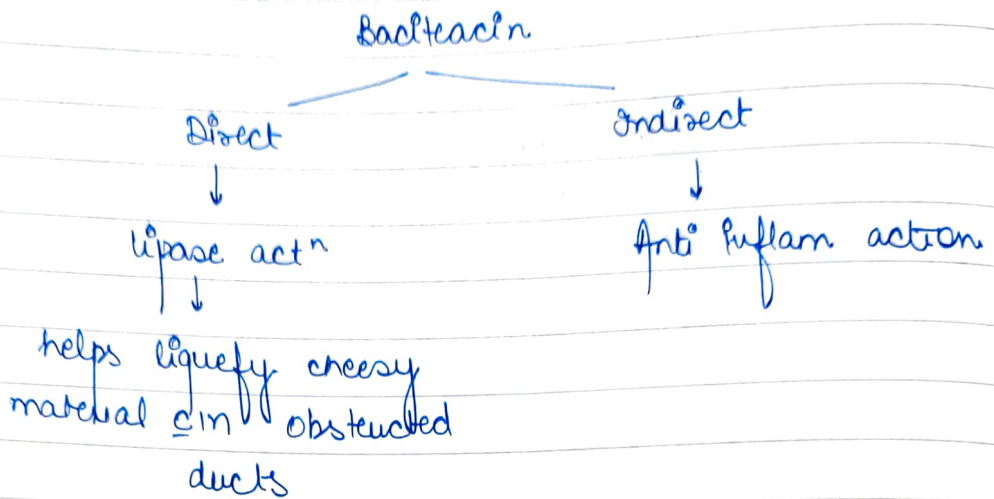
(X) of use in Cicatrical MGs
 MG atrophy

- b) Eyelid hygiene → Baby shampoo
 conj swab in chronic cases

- 3) Role of artificial lubricants →

- tear supplementation & distribution over Ocular Surf.
- Protect epi from wiper effect of lids while blinking
- Washing out hyperosmolarity by removing toxins from OS.

Role of topical A+B →



• FA

- Topical Azithromycin 1% BD x 2D
OD x 12d
Duration - 3mlhs

Role of systemic A+B →

Doxycycline 100mg BD x 2wk
100mg OD x 2-3mlh

Azithromycin 500mg D₁
250mg OD x 4d

• Role of topical steroids -

• Role of Newer Modality - Cyclosporine

Dietary modification - Omega 3 FA.
200mg OD x 1yr
Omega 6 FA → avoided.

role of dx

Intraductal probing (100μ)

Demodex

— Glycol scrubbing = 50% tea tree oil mixed
= olive oil
Ivermectin 1% cream.

Allergic

VSD

++ Ocular itching -
Mucus stinging, white
Thin, clear Conjunctival
+ve for eosinophil conjunctivitis

Allergic
x use of Mast cell stabilizers
Conj

AKC/VKC

Acute Conj

balling

Pink

~~AKC~~

AKC

~~VKC~~

VKC

conj

Papillary hypertrophy

superior

VKC

Trachoma

Milky hue, freedom of fornix
recurrent in hot weather

young O? Around Erythema
↑ puberty eosinophil

♀ = O?

VKC

GPC

Larger height Cobble
& breadth > 1mm

Papillae

homogeneous Cobbles
Small even 0.3-1mm
(mace)

Varying in shape
in different pattern
mucus off them
gelatinous nodules

steroid

+

limbal
Tx

↑↑

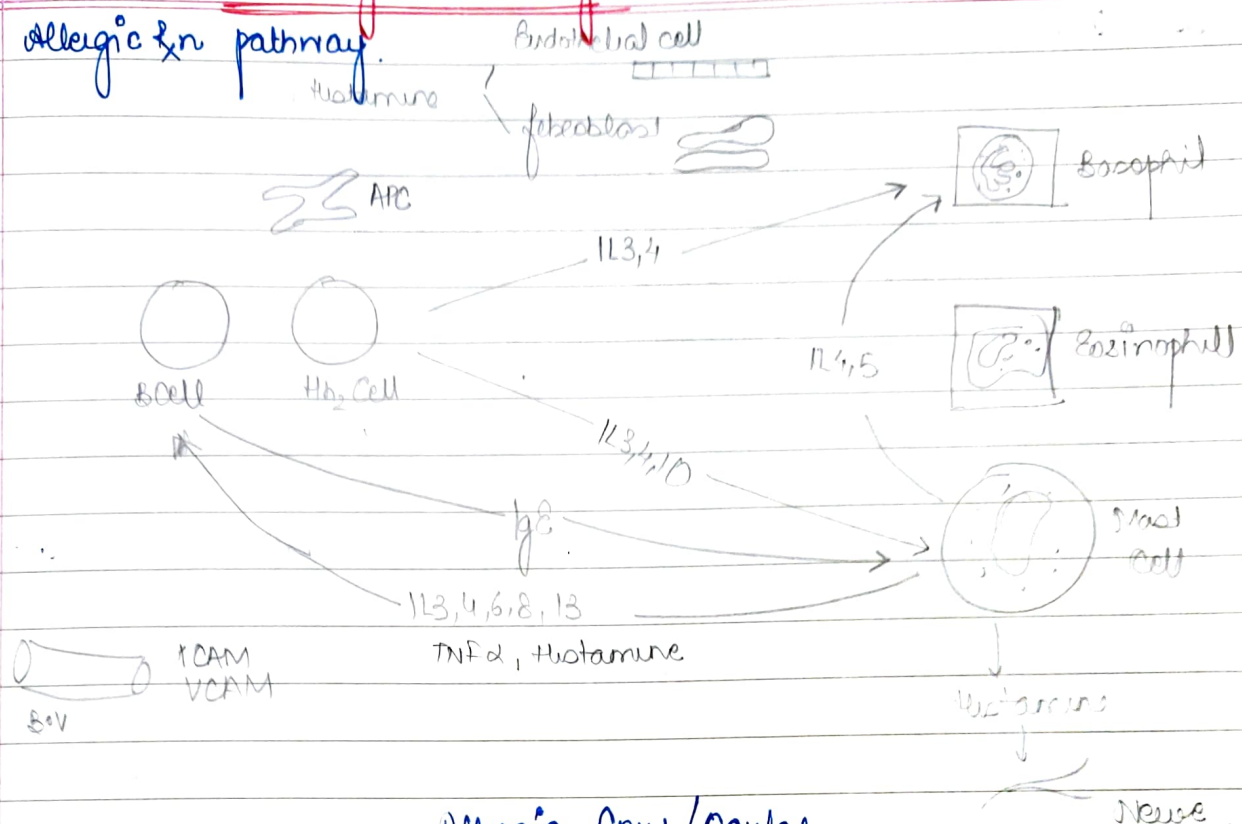
↑↑

↑↑

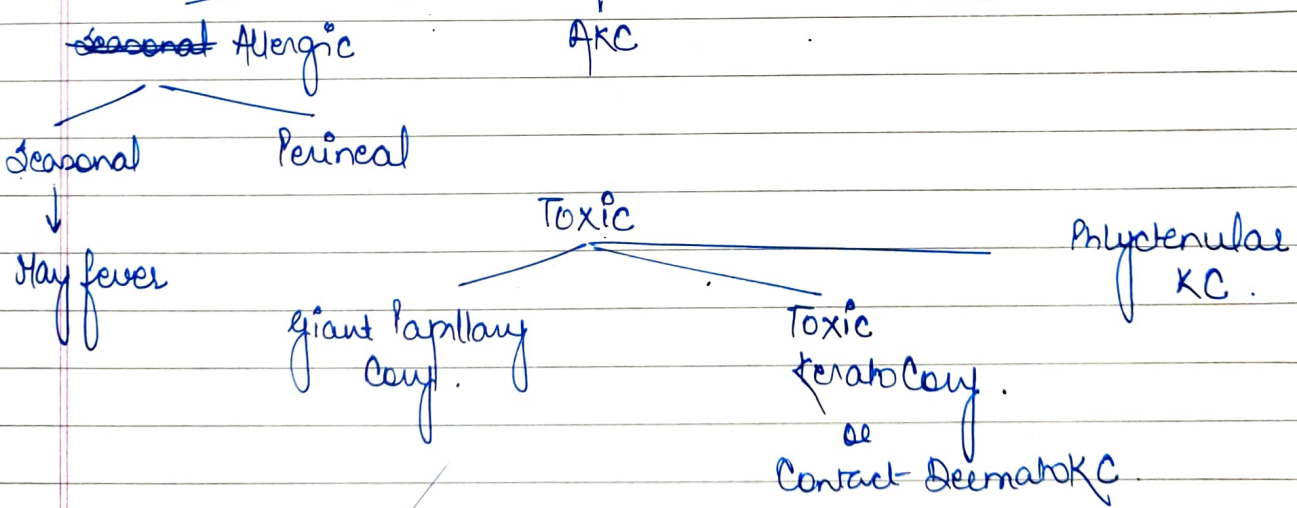
Histamine levels
Mucous productⁿ
itching

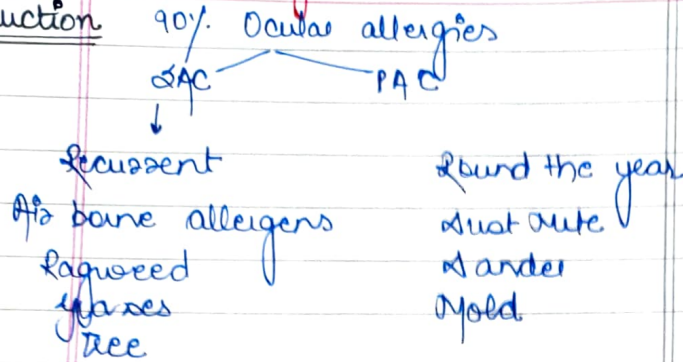
Allergic Conj

Allergic & n pathway.



Allergic Conj/Ocular Allergy.



AllergicIntroduction

Allergens + Tear film → Conjunctival cells

Mast cell
degranulation

Release of chemical
mediators

Type I HST rxn

AKC
Ocular Manifestation of Atopy
Eczema, Rhinitis, Asthma, Atopic
dermatitis
childhood, Bil, Perineal symptoms
extend into Adulthood.

Loss of Outer third of eyelashes
— Se Heerogge sign

CF

Itching — Hall Mark.
Redness, Biting pressure behind
eye, Intermittent
Enquire abt trigger
Allergic Rhinitis, Asthma
w/o medication
Allergic shiners, Allergic
salute.

Ac Ch

clear, white
exudate Mucopurulent
 thicker, stickier
 exudate

Bell's

vs OED

Muddy discoloration of Sclera

Indurated lid margin → 2° Blepharitis
Maceration of Cornea
Punctal stenosis
Additional lid fold → Dennie's line
Pale Conj.

Papillary hypertrophy — Inf Palpebrae
Conj

Conj Scaling

Shrinkage of Conj fornix
↑ tearing

Symblepharon +

LO Vision — C. Scar, Keratitis, KC

Ovoid, horizontally oriented ulcer
= Solar blebs

Peripheral Corneal Neovasc +
Shield Cataract ✓

VKC

Vernal - Occurring in spring
naam, $\rightarrow$
early onset, remit by late teens

- diff 4m limbal Tx
- Horner Trantas dots - cleared
staddle limbus (x Immune
marginal infiltrate - lucid interval)
- shield ulcer vs other ulcer
surrounding haze
pits
muculent discharge

Lid eversion seq.

- Cobblestone $\rightarrow$ Upper tarsal plate
- Cobble - large, pleomorphic
- Horner Trantas dot - chalk white
caused sup infiltrate staddling
the limbus
- gel, translucent spots 2mm inside
- shield ulcer - central oval ED
 $\subseteq$ white fibrin coating is well
delineated $\subseteq$ no surrounding haze
x pits
- Tenacious Cord like mucus
- of scaling + nt - s/o AetH's line
of Trachoma
- Pseudo + $\rightarrow$ Keratitis, photophobia
 $\uparrow$ bulk of Upper tarsal
- Pink cany
- Itching - knuckle rubbing
thick tenaciousropy strands
 $\subseteq$ elastic quality H. Maxell
Lyon sign.

GPC.

CL, Sx Sutured bands & Ocular
prosthesis

$\approx$ VKC $\rightarrow$ Papillae in upper tarsus
CL - RGP & soft $\rightarrow$

Type I & IV

Copious production of mucus
proliferation of subepi collagen
Hyperactivity of resident mast cells

hyperaemia $\subseteq$ strands of mucus
to milky white discharge

Allergic

Histopath →

early phase
late

Preformed mediators → histamine
tryptase & heparin.

AKC

type 1, 4 HST

↑ Mast cell, B, L, E.

Heparin, tryptase — papillae formation

TCR γ, δ → OCP;
x in Allergic

AKC vs
ocular disorder

↑

↑ langerhan cells

actual abbestration site — chemosoma level

%

Remove offending agent

- Tea substitute — To dilute allergen & wash away cytokines
- H_1 Antihistamines
- Mast cell stabilizers — dual
0.2% OD olopat
- NSAIDs → ↓ itching & low infectⁿ st x mid of immune cells

- Steroids (↓↓)
(steroid responders)

Refractory	—	Systemic
Vision threat	—	ImmunoSx
Shield Ulcer	—	Potent steroid
Severe / Che	—	CSA
Moderate / Chronic	—	CSA
Moderate / Inter	—	+ mild steroid
mild allergy	—	Mast cell / Antihist

Mast cell stabilizer

↓ pH → saline irrigation,
use of mucolytic agent.
Cold compresses

CS → tapering dose

Topical tacrolimus

mild → symptoms ✓ — x Careca

Moderate ✓ x

Severe ✓

mild-moderate SPK
or

Severe SPK or

Cornea Ulcer

mild — ALHM (Acid + Lube + Antihist + M)

Moderate → Intermittent — Intepred + AL

Chronic — CSA + ALH

Severe — ALHM + CSA + ~~CSA~~ SPK

Blinding — Potent steroid
Supratarsal steroid

Pseudoepitheliomatous

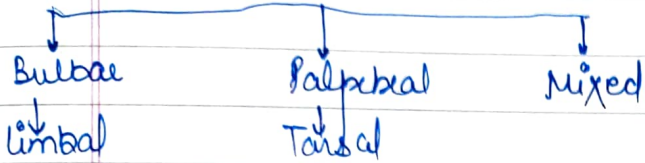
classmate

Date 23
Page

VKC

Coldstone → collagen proliferatⁿ
ground subs + cellular accumulatⁿ

→ 2 eosinophils / 45 power field
- Erythematous phase of hyperaemia



Avoid allergen / Omega 3 FA.
Cold compress / tinted glasses
Tear substitute / x rubbing
steroids — Loteprednol

Togky ulcer.

Classificatⁿ of shield Ulcer

Cameron's classificatⁿ

- grade 1 → clear base for re-epithelize + mild scaling
2 → Inflamm debris at base prone to inf. Poor Medical Regular tx debidement CSA
3 → large base & elevated plaque AMT ✓

Mucus — 10 to 20% NAC

- tx pf Mech phos / ^
- sub tarsal injection Triamcinolone
- Risk of Amblyopia < 6 yrs
CSA — 0.05 to 2%
0.1%.

Tacrolimus
Cyto to papillae

GPC

Tear conc of lactoferrin ↓ in both VKC, GPC.

Eosinophil degranulatⁿ
↑ EMB

(No Rubbing) —

- ↑ Mast cell degranulatⁿ → Vicious cycle
- KC predispose to acute hydrops

Cleaning

Prevention — Regarding CL usage
Identify the cause

x role of CS.

Toxic
Medicamentosa
↑

Antihistamines

H₁

Levocetastine
Emedastine

oral action

Alpat.
epinastine
Ketotifen
Azelastine
Alocraftadine

NSAIDs

flue

Ketorolac

⊗ PDA approved
for SAC
[Ulcerative Korocho]

Mast cell stabilizer

Cromol 4%
Pemimolast 0.1%

Nedocromil
Lodoxamide 0.1

Mucosal mast cell
If Cromol fails

Intercept

⊗

New

• Tacrolimus
Omalizumab (Anti IgE monoclonal Ab)

Anakinra

Isunakinra (EBI-005)

Spleen tyrosine Kinase (Syk)

Humanized anti Eotaxin 1 recep
H₄ recep inhibitor

Allergen specific Immunotherapy (SIT)
L grassweed, Ragweed.

IL12cep
Antag

Toxic Medicamentosa

Patch test — diff allergy: from toxin

>> inferior conjunctiva

x eosinophils are Allergy

Cornea — PER

Sodoximidine — Pseudodendritis x

— Timolol

- Atropine, Beimanidine

- Right eye >> affected in Right handed person.

Pseudophakia → Waxing & waning superficial stromal gray white deposition in peripheral cornea in VKC.

VKC

younger
 $\sigma > \phi$
 Limited
 Spring
 Upper tarsus
 face
 shield ulcer
 Common
 Rare
 -

Age
 Sex
 Duration
 Time of year
 Conj. involvement
 " Cicatrization
 Cornea
 Corneal scar
 Corneal vascularizatⁿ
 Vision Threatening

AKC

Older
 No pediclection
 Chronic
 Perennial
 Lower Tarsus
 Common
 PED
 Common
 Common
 +

Goldenhar Syndrome

Oculo - auriculo - vertebral spectrum

sporadic

Systemic

Ocular

- Hypoplasia of Maxilla
Mandibular region
Mandibular

Leamoid

UL notching

Cebobama

Mico-ophthalmos

Also Cebobama

- Macrostomia

Microtia

Pre-auricular & facial skin tags

Hemivertebrae - >> Cervical

Mental handicap

Cardiac

Renal

CNS

Anomalies