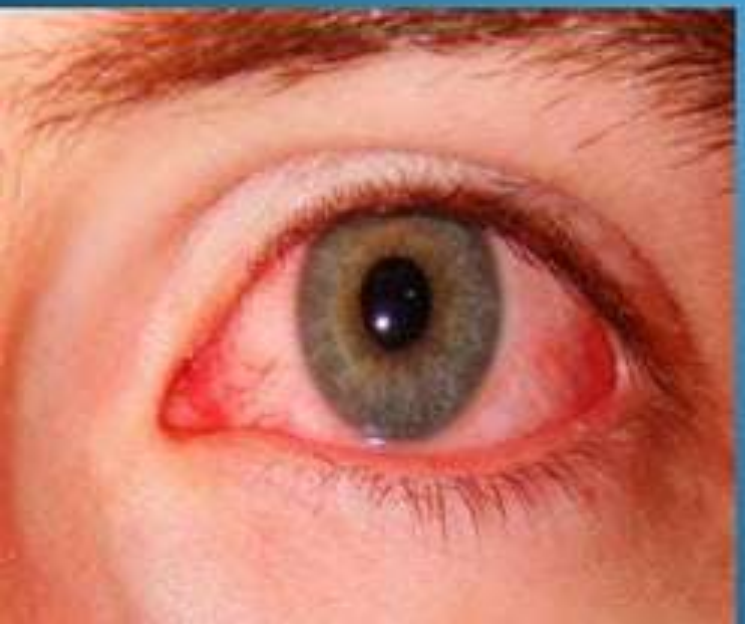
Viral Conjunctivitis



DR AMOL WALKE
MIMER MEDICAL COLLEGE

Causative Agents:-

- *Adenovirus conjunctivitis(>90% cases).*
- *Herpes simplex keratoconjunctivitis.*
- *Herpes zoster conjunctivitis.*
- *Picorna viruses(Enterovirus and coxsackie virus).*
- *Poxvirus conjunctivitis.*
- Myxovirus conjunctivitis.
- Parammyxovirus conjunctivitis.
- ARBOR virus conjunctivitis.

Symptoms:-

- Watering
- Redness
- Irritation(Radak).
- Itching.
- Photophobia(When Cornea is involved).

Signs(Anterior to posterior):-

- ***Eyelids*** :

  edema,Ranging from mild to Severe.

- ***Lymphadenopathy***:

  Common.Tender Pre-auricular nodes.

- ***Conjunctiva***:

  Hyperemia,Follicles.May be Papillae(Particularly superior tarsal conjunctiva).

- ***Severe Inflammation:***

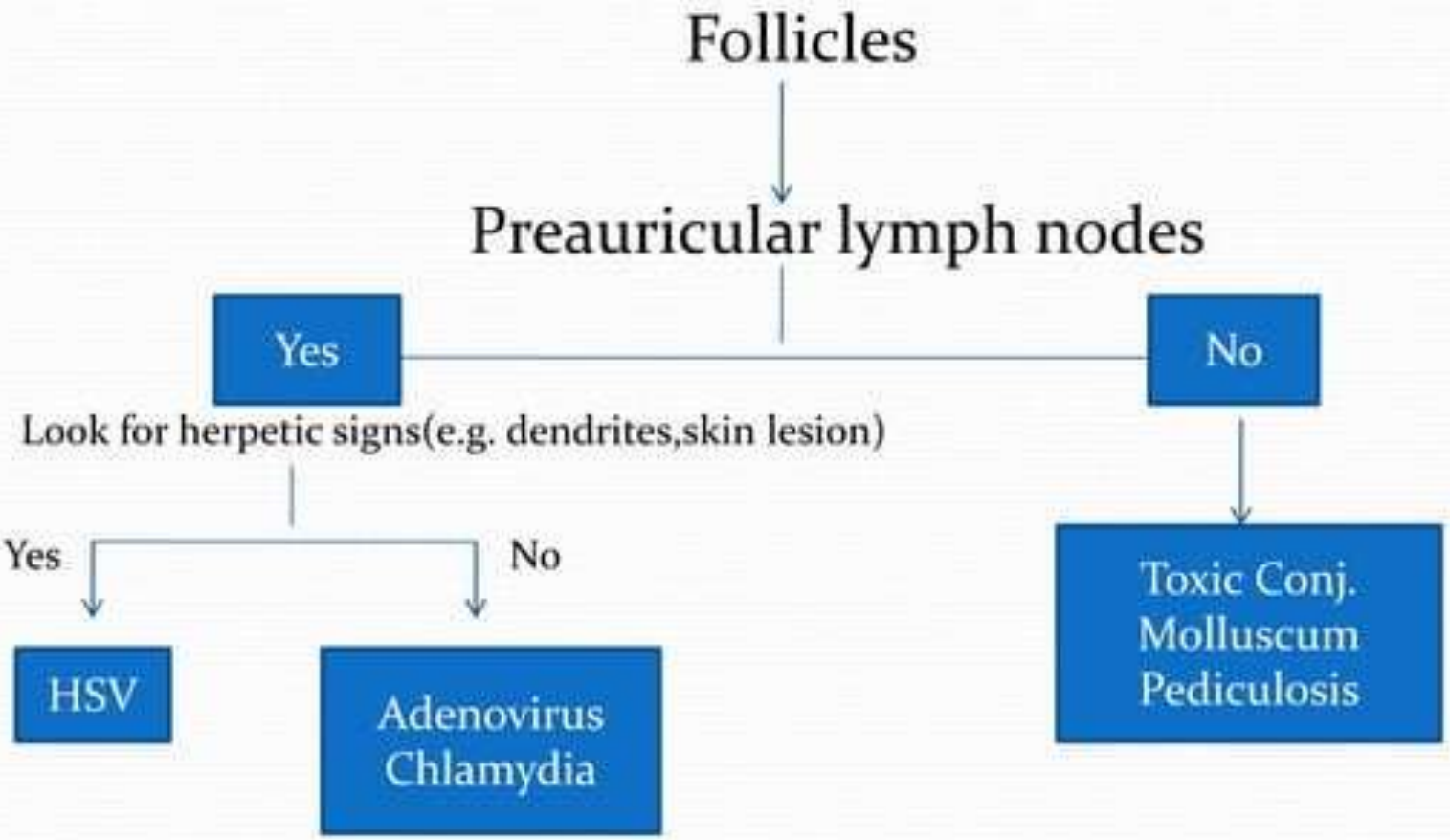
  may be associated with conj.Hamorrhages, chemosis, membranes(Rare) and pseudomembranes.Sometimes conj Scarring.

Signs(Cont'd):-

- ***Keratitis(Adenoviral):***
  - Epithelial microcysts in the early stage.
  - punctate epithelial keratitis:Usually occur in 7-10 days of onset of symptoms.Resolving in 2 weeks.
  - Anterior Stromal infiltrates/SEI:may persist for months or years.
- ***Anterior uveitis:***

  Usually mild.

Algorithm for Follicles:-



Source:Wills Eye Manual.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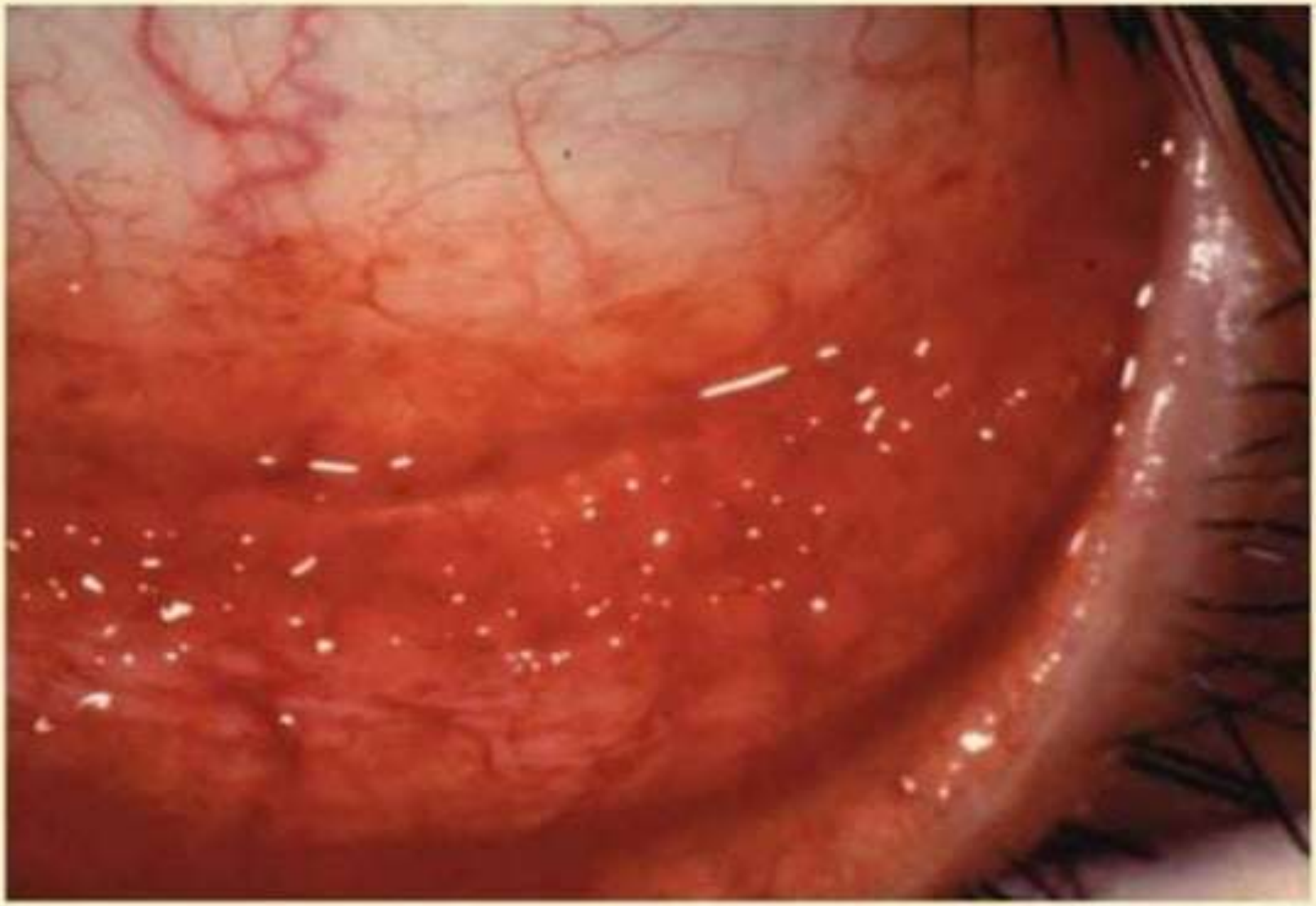
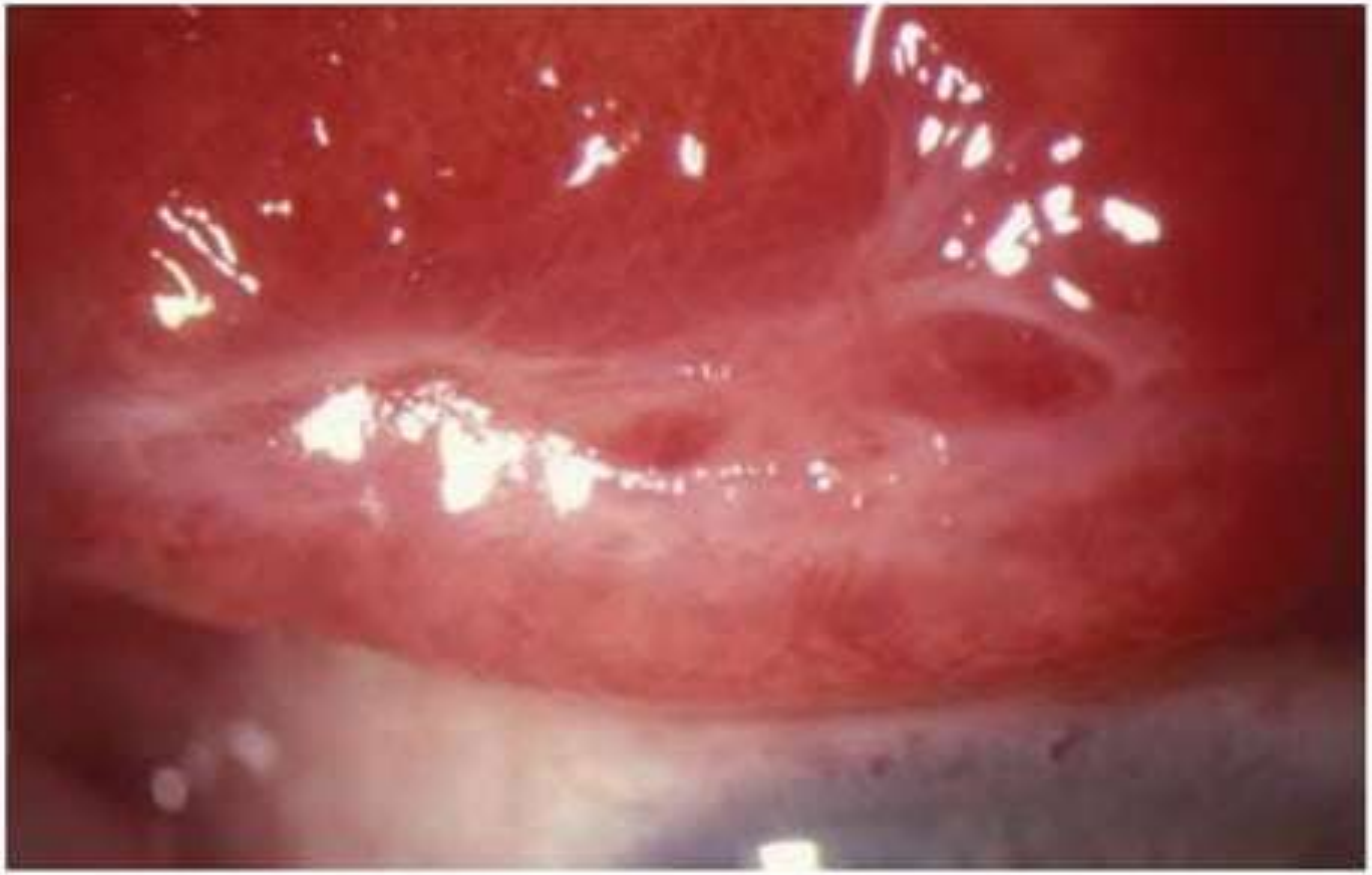
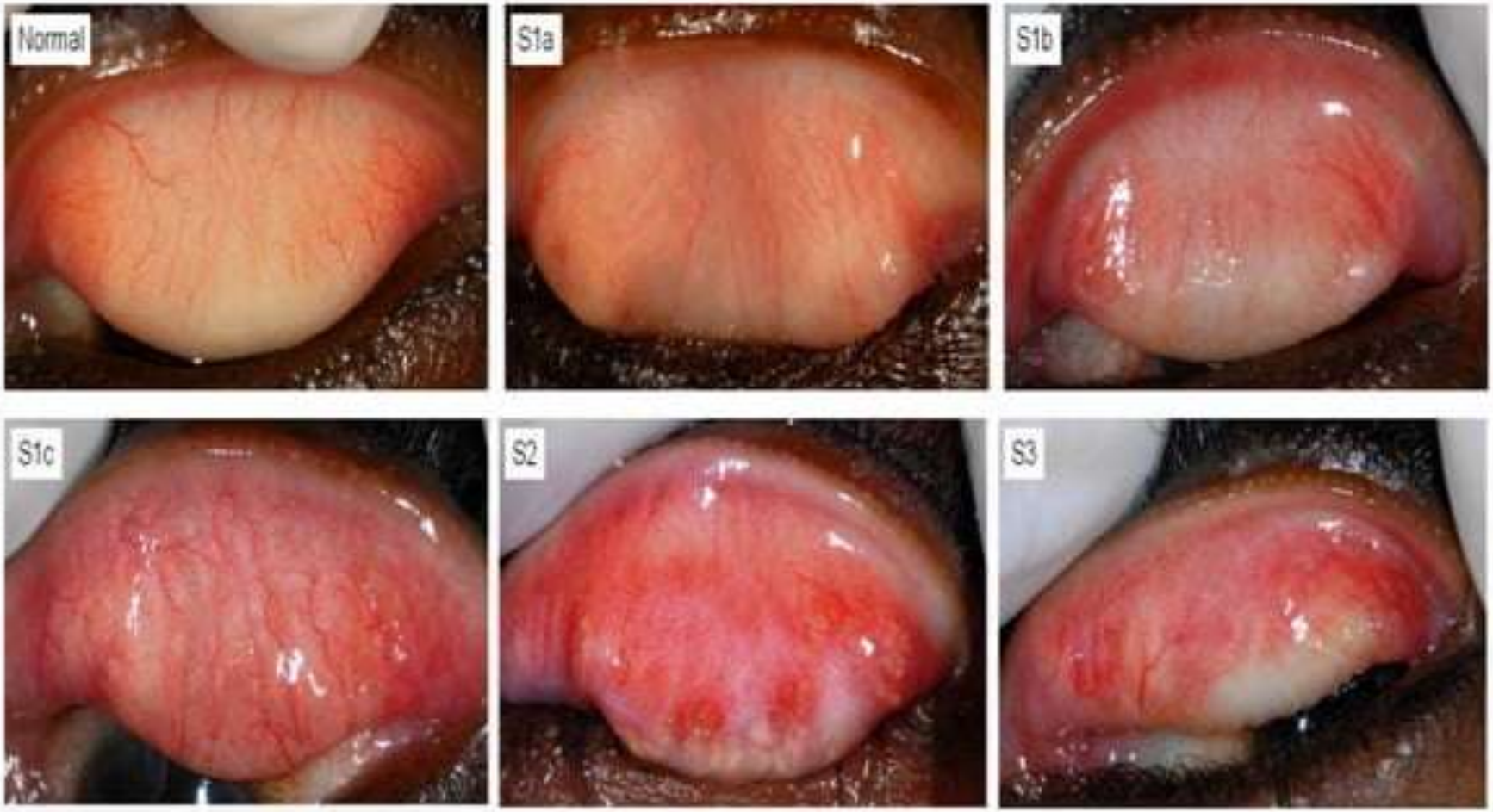
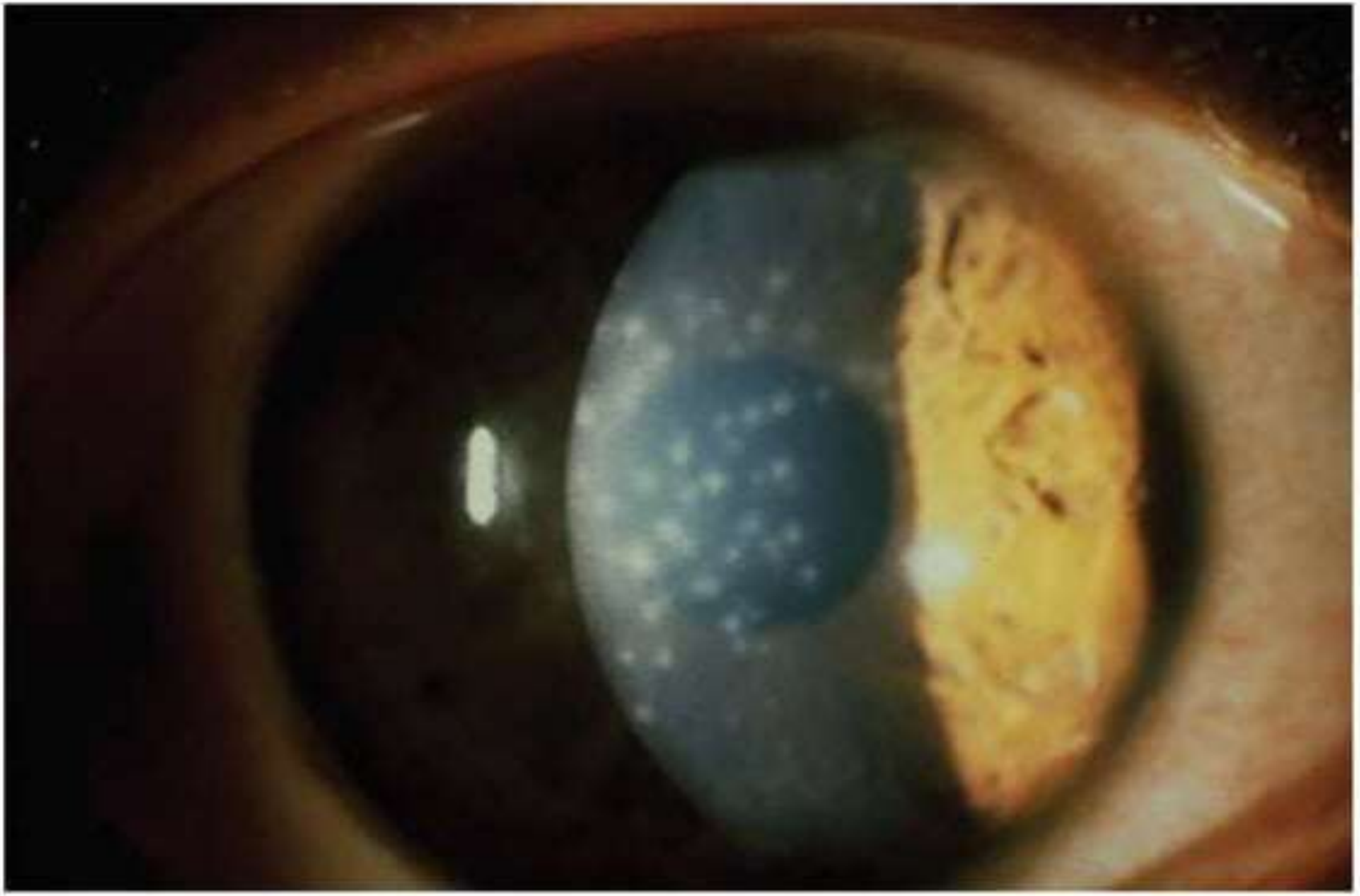





Normal
S1a
S1b
S1c
S2
S3



Adenoviral Conjunctivitis

- Non-enveloped, double stranded DNA viruses, which replicate within the nucleus of host cells. General reservoir is only human.

Type of adenoviral conjunctivitis:-

- *Epidemic keratoconjunctivitis (EKC)*
- *Nonspecific acute follicular conjunctivitis*
- *Pharyngoconjunctival fever (PCF)*
- *Chronic /relapsing adenoviral conjunctivitis*

Spread of infection:-

- ***Facilitated by***

  i)virus can survive on dry surfaces for weeks.

  ii)Viral shedding may occur for many days before clinical features are apparent.

- ***Transmission by***

  i)Contact with Respiratory or ocular **secretions**.

  ii)Via Contaminated Fomites such as **Towels.**

  iii)Route of transmission is usually **Eye-Hands-Eyes.**

  In Clinical setting,**Eye-Instruments-Eye.**

I)Epidemic Keratoconjunctivitis:-

- *Most severe* presentation.
- *Caused by* adenoviruses type 8,19 and 37.It is markedly contagious.
- *incubation period* after infection (8 days) & **virus shed** from the inflamed eye for 2-3 weeks.
- *Keratitis* occurs in 80% cases.

II)Non-specific acute follicular Conj.

- *Most common* form of acute follicular conjunctivitis
- *Caused by* adenovirus serotypes 1 to 11 & 19
- *Milder form* of acute follicular conjunctivitis.
- Unilateral symptoms, *Other eye involved 1-2 days later*, but less severely.
- Patient *may have systemic symptoms* such as sore throat or common cold.

III)Pharyngoconjunctival fever:-

- adenoviral infection commonly associated with *subtypes3,4 & 7*.
- Acute follicular conjunctivitis, associated with *pharyngitis*.
- *Fever* & *pre-auricular lymphadenopathy*.
- Cornea : *superficial punctate keratitis. (30%)*

IV)Chronic/relapsing adenoviral conj.

- **Rare**
- Gives a clinical picture of **chronic non-specific follicles/papillas**.
- Can **persist over years**, but eventually **self limiting**.

Herpes simplex Virus:-

- Causes **Follicular conjunctivitis** particularly in primary disease.
- Usually ***unilateral***.
- Often Associated ***skin lesions***.
- Minute,Micro dendrites may be mistaken for punctate epithelial keratitis,But ***Corneal sensation is reduced*** in HSV (Source:Harper).

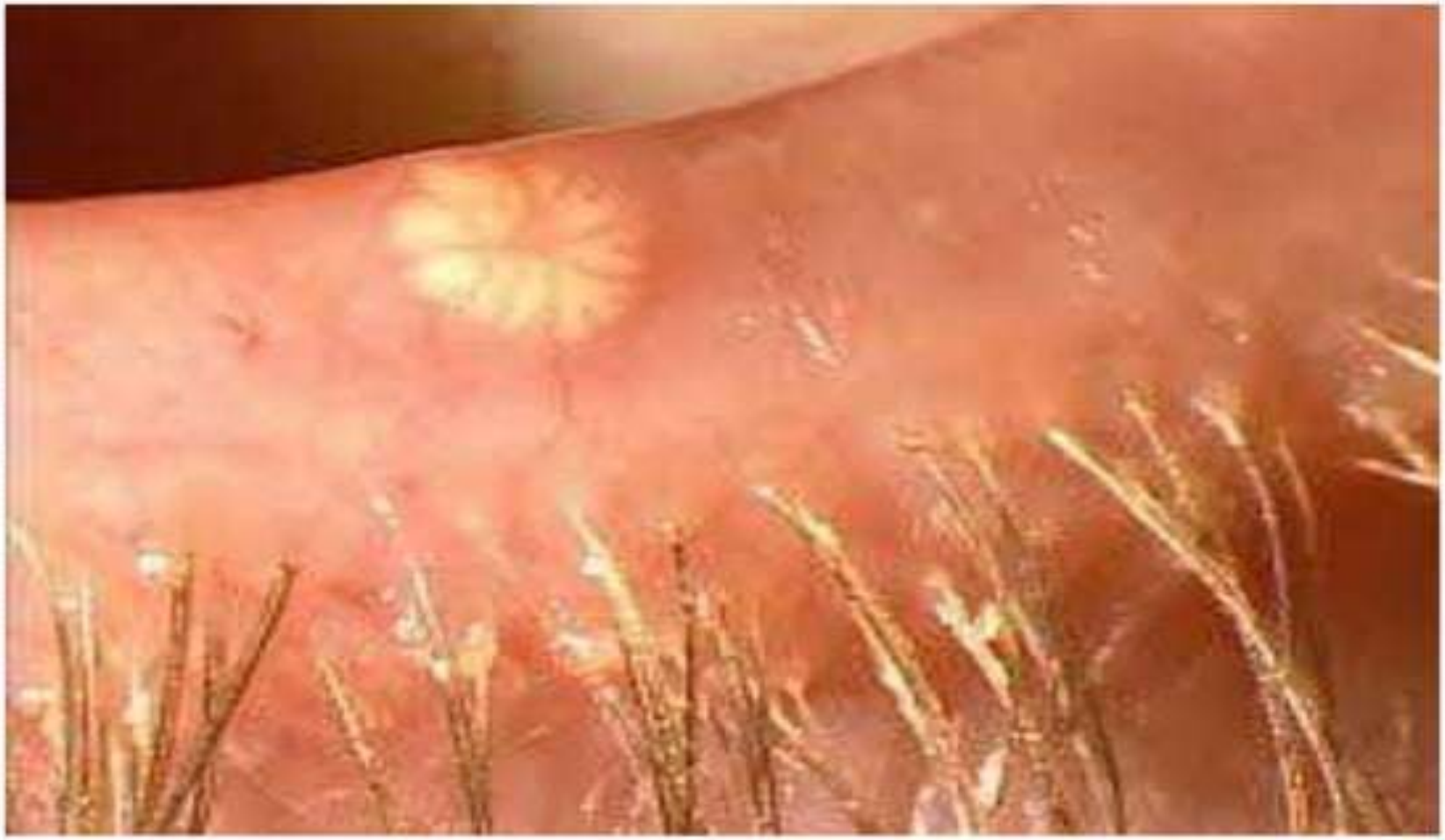
Acute hemorrhagic conjunctivitis:-

- Usually occurs in ***tropical areas***.
- Caused by ***Enterovirus and coxsackie virus(Picorna virus family).***
- Rapid onset,***resolves within 1-2 weeks***.

Molluscum Contagiosum:-

- Caused by ***dsDNA pox virus***.
- Peak incidence of getting the virus is *2-4years*.
- Typically,Virus causes a ***skin lesion***.
- When skin lesion is on the lash line area of eyelid,it causes viral shedding and follicular conjunctivitis.
- ***Examine eyelash line carefully*** when Chronic,unilateral eye irritation and mild discharge is present.

Molluscum eyelid lesion(Pic):



Systemic viral infections Causing Conjunctivitis:-

- Measles , mumps , Varicella ,HIV etc.

Investigations:-

- Giemsa stain.
- PCR
- Viral culture.
- Immunochromatography.
- Serology.
- For other causes in non-resolving cases.

TREATMENT

Adenoviral conjunctivitis:-

- *Supportive treatment* for amelioration of symptoms is the only treatment required and includes:

  I)Artificial tears 4x/d.Preferably preservative free.

  II)Topical Anti Histamines and vasoconstrictors.

  III)Cold Compresses

  IV)Discontinuation of contact lens wear.

(Cont'd)

V)Removal of membranes/pseudomembranes.

VI)Topical antibiotics.

VII)Povidone-Iodine:kills free adenoviruses.

VIII)Topical Steroids:For severe Membranous or Pseudo-membranous conjunctivitis and SEIs.

Reduction of Transmission Risk:-

- Meticulous hand hygiene.
- Avoiding eye rubbing and towel sharing.
- Disinfection of instruments and clinical surfaces after examining an infected person.

Acute Haemorrhagic Conjunctivitis Treatment:-

- *Prophylactic measures* similar to EKC.
- *Supportive measures* same as Adenoviral.
- Usually the disease has a *self-limiting* course of 7 days.

Molluscum treatment:-

- Usually the lesion is ***self-limiting*** in immunocompetent patient.
- Removal is needed to address secondary Conjunctivitis or for Cosmetic reasons.
- ***Expression*** by making a nick in the skin by a needle is usually effective.

Herpes Simplex Treatment:-

- Usually *self limiting.*
- *Topical antiviral drugs* control the infection effectively and prevent recurrences.
- *Supportive measures* are similar with Adenoviral.

Did you know...

The pupil of the eye expands as much as 45% when a person looks at something pleasing.

didyouknewthat.wordpress.com


Thank You