



Common Eye Conditions

Part 2

For MO

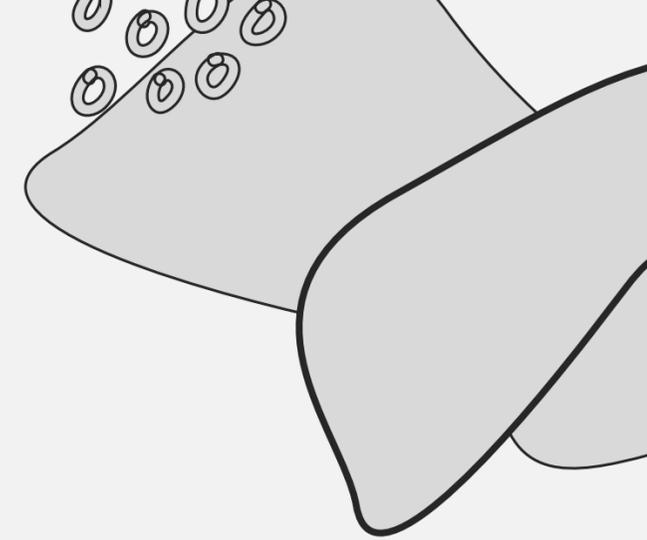




LEARNING OBJECTIVES:

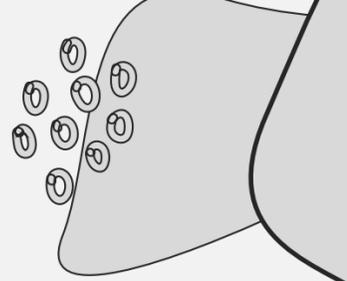
At the end of this session, the participants should be able to:

1. Know the cause of the following conditions – Vit A deficiency in the eyes; Glaucoma; Trachoma and Eye injuries
2. Understand the key signs and symptoms of each of these conditions
3. List out the steps in managing such cases
4. Determine the role of the CHO for each of these cases.

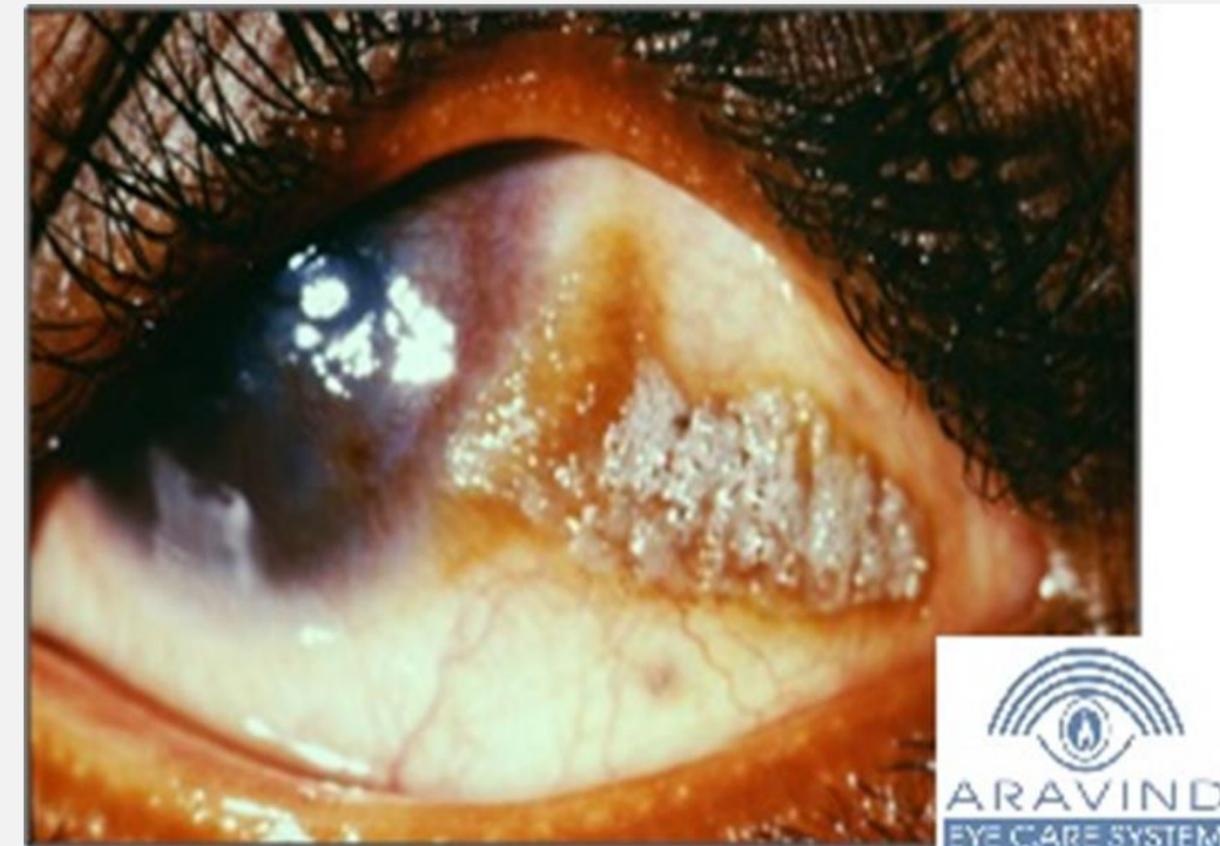




VITAMIN A DEFICIENCY - XEROPTHALMIA



- Early vitamin A deficiency in which cornea keratinizes, becomes opaque, and forms dry, scaly layers of cells. The affected cornea is susceptible to infection leading to corneal opacity and even melting of Cornea (Keratomalacia).
- The conjunctiva may keratinize and develop plaques known as Bitot's spots.
- Although rates of Xerophthalmia have fallen, the Number of affected children is still
- high. It is seen especially in poor families and malnourished children/Severe Acute
- Malnutrition (SAM), children with diarrhoea and children with measles.



Clinical or subclinical zinc deficiency may also increase the risk of vitamin A deficiency.





CLASSIFICATION OF XEROPHTHALMIA BY OCULAR SIGNS

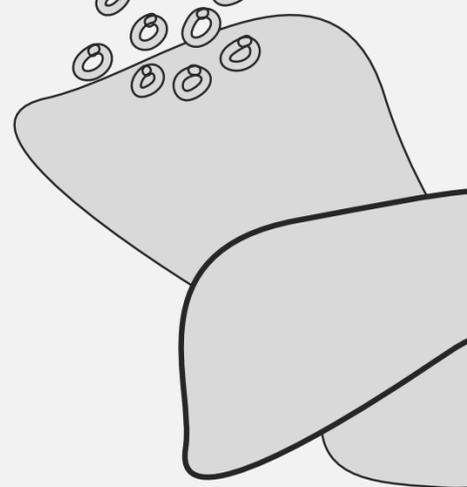


STAGE	FEATURES	DESCRIPTION
XN	Night Blindness	Difficulty in seeing in the dark
X1A	Conjunctival xerosis Dryness of the conjunctiva	outer lining of the eye; no tears
X1B	Bitot's Spots	Dirty white patch on outer side of conjunctiva
X2	Corneal xerosis	Dry, hazy appearance of the cornea
X3A	Corneal ulceration/ keratomalacia < 1/3 corneal surface	Small ulcer on cornea
X3B	Corneal ulceration/ keratomalacia > 1/3 corneal surface	Ulcer larger in the corner
XS	Corneal scar	Damaged cornea causes blindness
XF	Xerophthalmic fundus	Damage to the retina at back of eye – advanced Stage – complete blindness





CLINICAL FEATURES



SYMPTOMS

- Delayed dark adaptation (an early symptom)
- Night blindness or nyctalopia (seen in more advanced cases)
- Photophobia (sensitivity to light)
- Diminution of vision
- Dry and scaly cornea (Xerophthalmia)
- Conjunctival plaques (Bitot's spot)

SIGNS

- Early vitamin A deficiency shows delayed dark adaptation.
- Keratinised conjunctiva shows Bitot's spots at a relatively early stage.
- Cornea shows dry and scaly layers of cells known as xerophthalmia.
- Cornea may degenerate and produce corneal ulceration, necrosis, and permanent corneal scars.



MANAGEMENT OF XEROPHTHALMIA

Screening and early diagnosis of Xerophthalmia

a) Look for night blindness and Bitot spots



Treatment of Xerophthalmia

a) Children below 5 years, receive 2 lakh International Unit (IU) of Vitamin A orally every 6 months under the Universal Immunization Programme (1 lakh IU below age of 1 year).

b) Severe cases of Xerophthalmia are treated using 2 lakh IU of vitamin A by mouth on the first day. Repeat the same dose on the second day and again after 14 days.



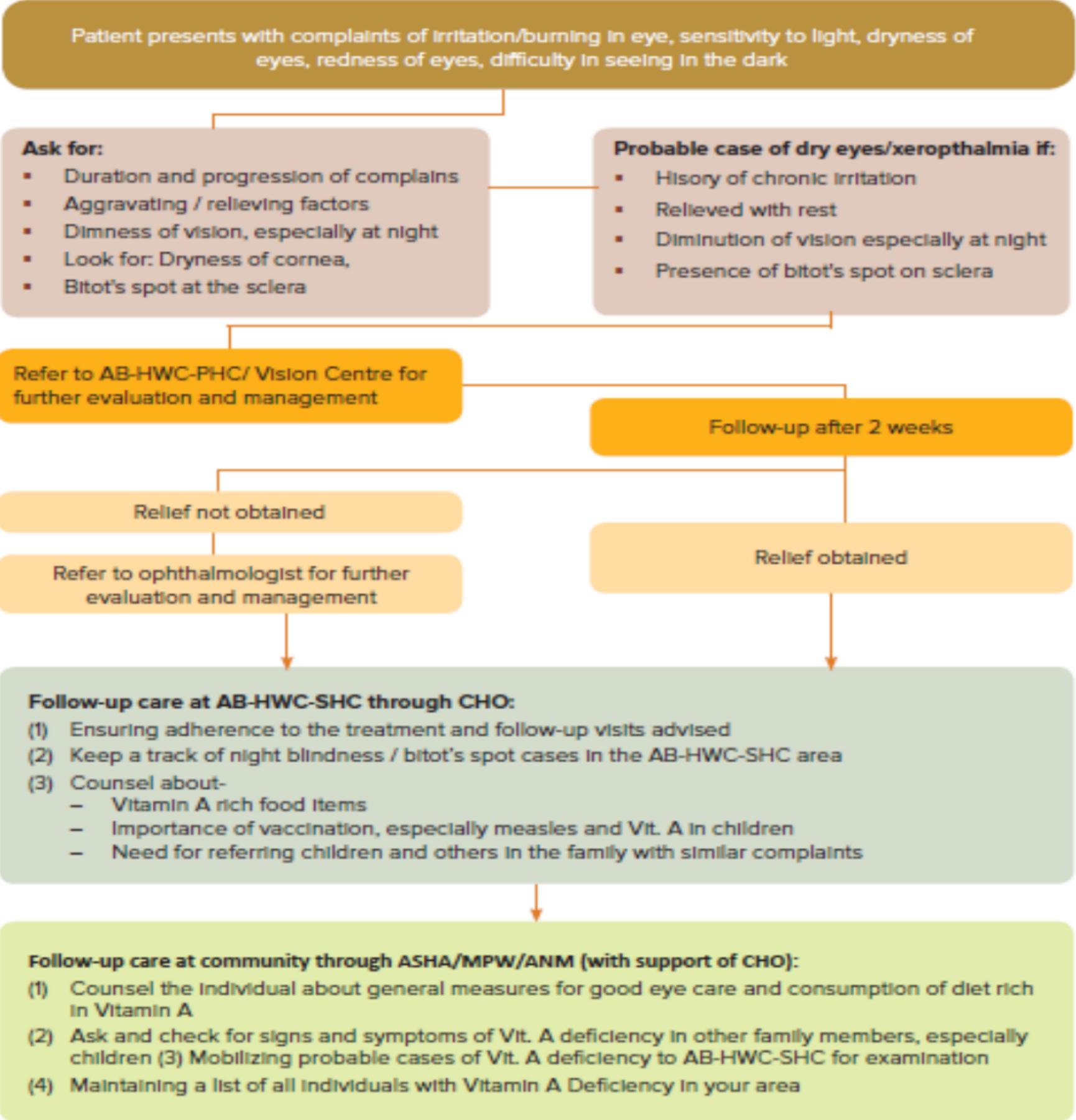


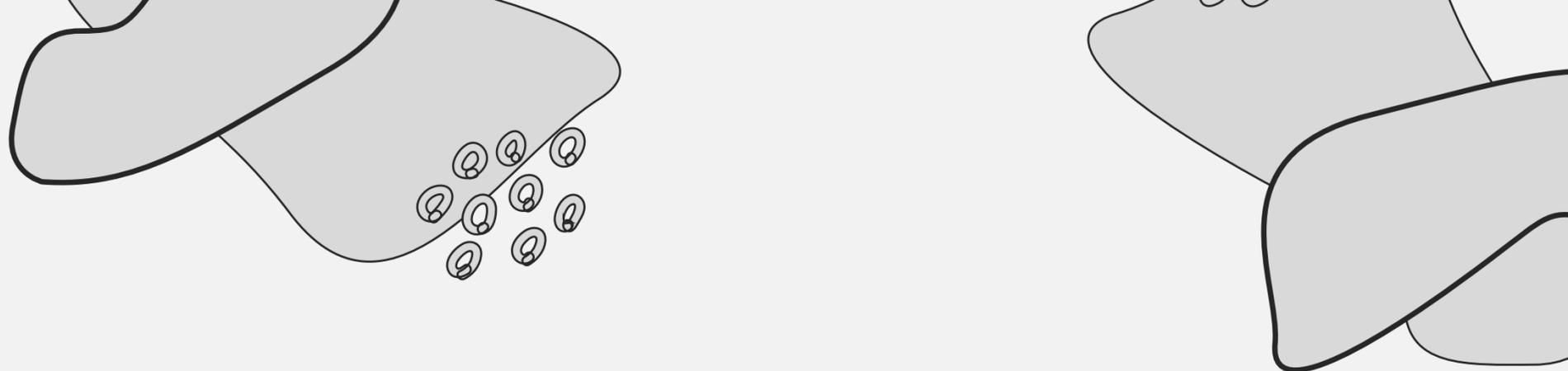
ROLE OF CHO IN MANAGEMENT OF XEROPTHALMIA



CLINICAL	PUBLIC HEALTH	MANAGERIAL
check for signs and symptoms indicating Vitamin A deficiency	Health promotion – nutrition counseling on eating of Vitamin A rich foods such as milk and milk products, butter, ghee; whole egg, liver, meat, chicken, fish; dark green leafy vegetables like Amaranthus leaves (cholai), drumstick leaves, methi etc; yellow and orange vegetables and fruits like carrots, tomato, sweet potato (shakarkandi), papaya, mango, apricots (khoomani), dates,	Report all cases and maintain updated documents
Refer for treatment to the PHC . Refer if treatment not working	Counsel on Vitamin A prophylaxis given to all children 9 months and above – 6 monthly doses till age of 3 years	Train the field team on Prevention and diagnosis of Vit A deficiency
follow-up after treatment initiated	Help the ASHA and MPW/ANM in your area in maintaining a register with a list of individuals suffering from Xerophthalmia.	Ensure adequate supplies of Vitamin A
Counsel on regular consumption of locally available vitamin A rich foods Counsel on need for Vit A prophylaxis in all children	Report to MO all cases of Bitot spots and night blindness. Monitoring all measles cases in children and ensuring that they receive vitamin A supplementation.	

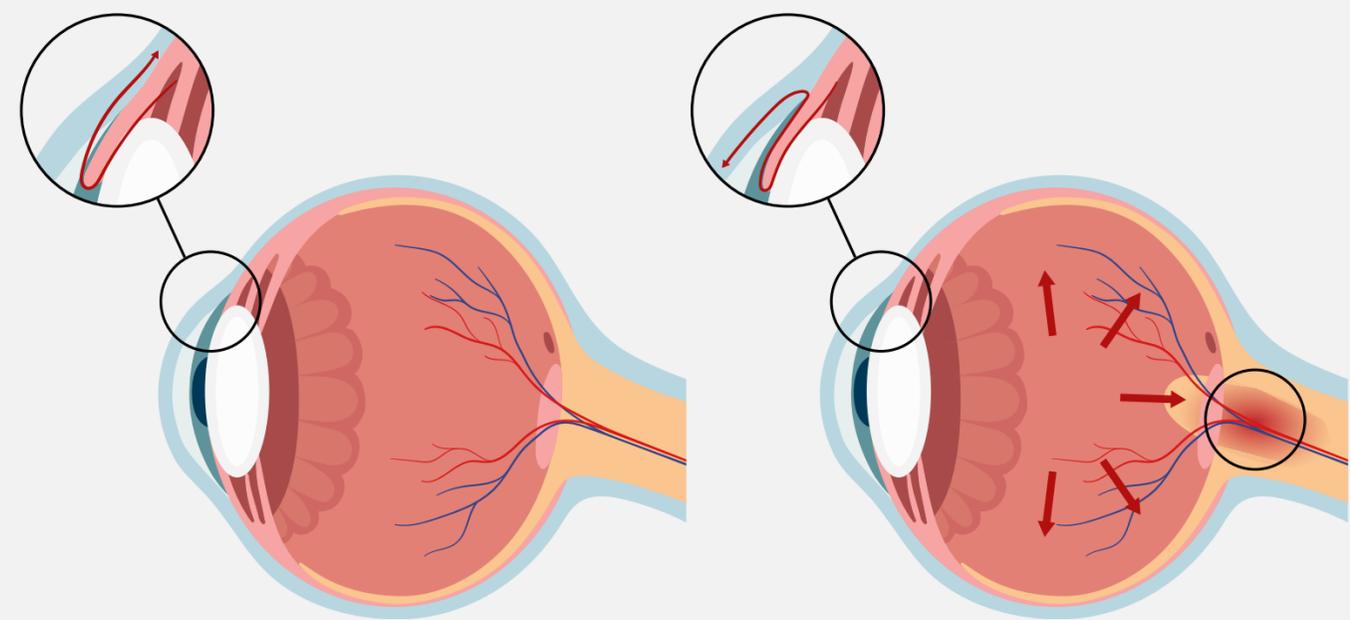






GLAUCOMA

- Glaucoma is a group of related eye disorders that cause damage to the optic nerve that carries images from the eye to the brain. In most cases, glaucoma is associated with higher-than-normal pressure inside the eye and changes in field of vision.
- It is also called as 'Kala Motia' in Hindi. If untreated or uncontrolled, glaucoma first causes peripheral vision loss and eventually can lead to blindness (known as 'silent thief' of vision). It is usually detected late when 40% of the vision is lost.

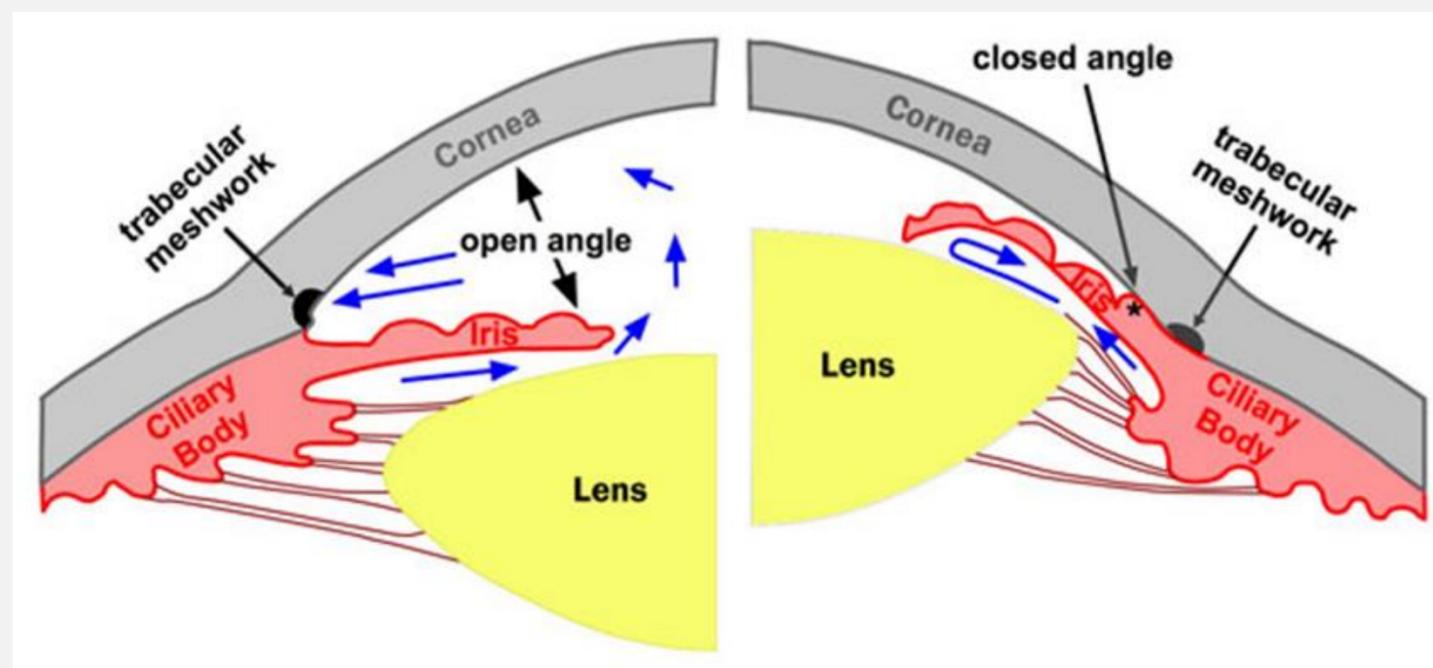




TYPES OF GLAUCOMA

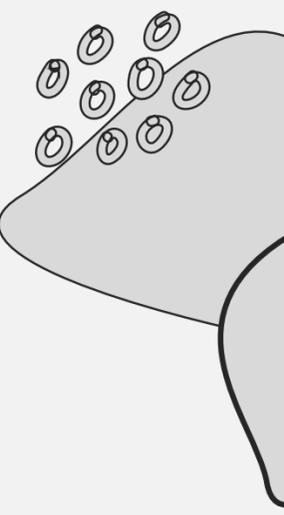
1. **Open-Angle Glaucoma:** This is the most common form of the disease. It happens gradually; where the eye does not drain fluid as well as it should (like a clogged drain). As a result, eye pressure builds and starts to damage the optic nerve.

2. **Angle-closure Glaucoma:** This happens when the drainage angle gets narrowed or completely blocked, resulting in a rapid rise in eye pressure. This leads to acute severe pain in the eye and should be treated as an eye emergency.



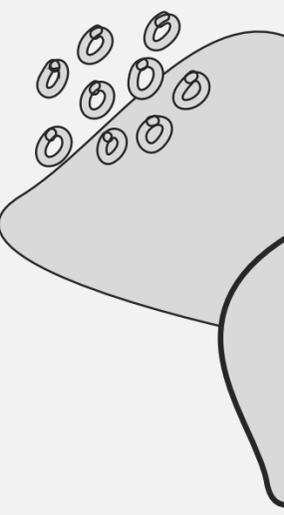


RISK FACTORS FOR GLAUCOMA



1. Age more than 40 years of age (sometimes it can also occur in children).
2. Family history of glaucoma.
3. History of diabetes, hypertension (blood pressure), heart disease, high lipids/cholesterol.
4. Use of steroid medications, like prednisone.
5. History of trauma to the eye or eyes.
6. Very high refractive errors.





CLINICAL FEATURES OF GLAUCOMA

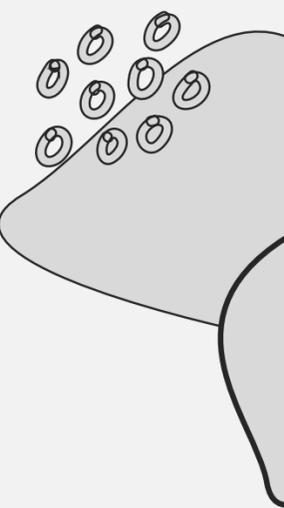
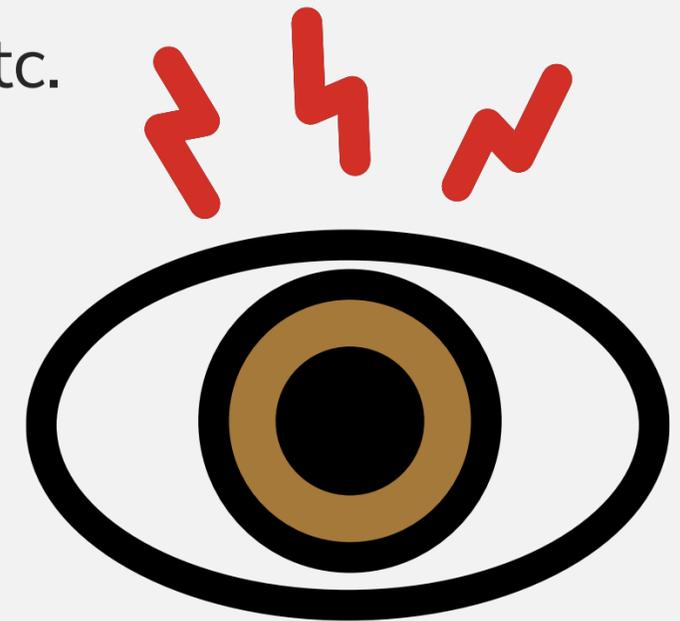
- In Open Angle Glaucoma, the patient is mostly asymptomatic, at least in the initial stages patchy blind spots inside (peripheral) or central vision, frequently in both eyes.
- Patients are left with only a tunnel vision in the advanced stages.





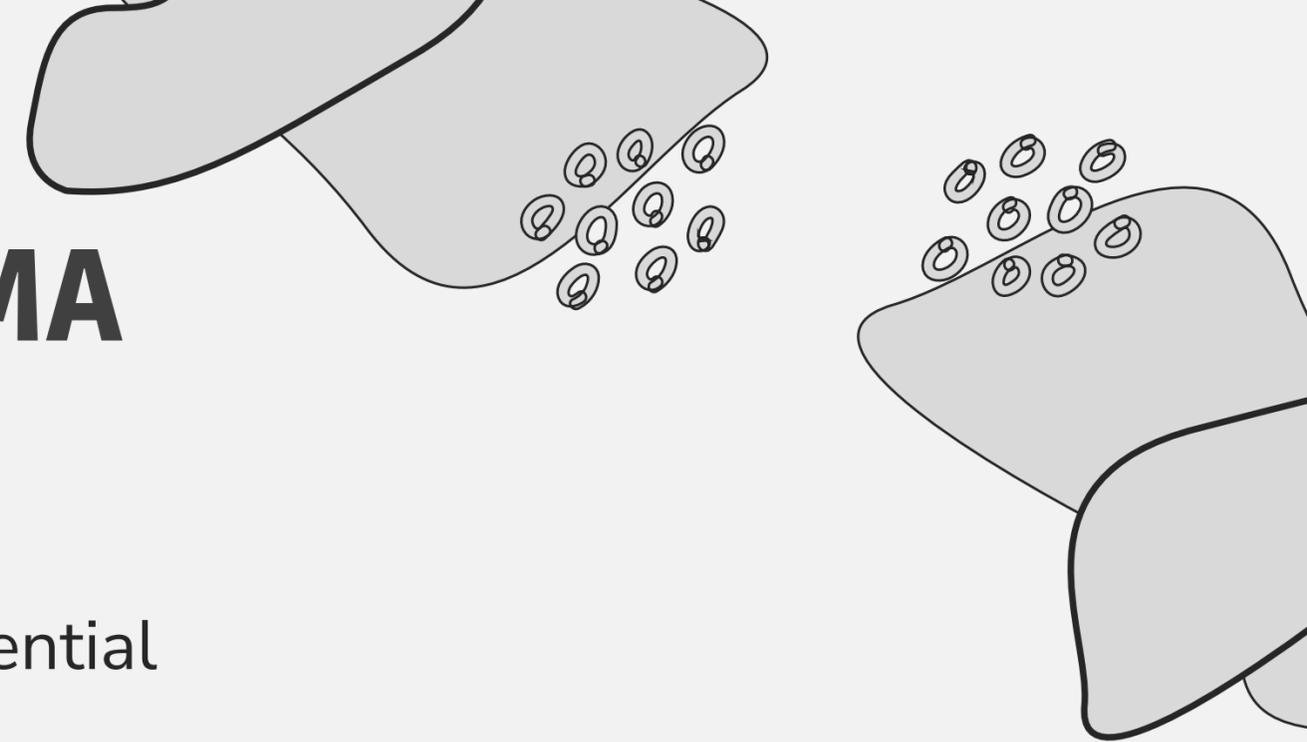
FEATURES OF ANGLE CLOSURE GLAUCOMA INCLUDE

- Sudden diminution of vision
- Severe eye pain
- Sudden redness of the eye
- Constitutional symptoms such as headache, nausea, vomiting, etc.
- Coloured halos/bright circles around source of light





MANAGEMENT OF GLAUCOMA



Screening for Glaucoma

- Early diagnosis and treatment of glaucoma are essential
- Glaucoma is diagnosed by measuring the Intra-Ocular Pressure (IOP) with an instrument known as Applanation Tonometer. Hence, early referral is necessary to the Medical Officer/OA.
- All cases of diabetes, hypertension, heart disease, and high lipids/cholesterol in the community must go at least once a year for an eye examination

Treatment

1. Controlled with anti-glaucoma eye drops
2. Few cases of glaucoma may also need surgery/laser treatment.
3. regular follow up



ROLE OF CHO IN MANAGEMENT OF GLAUCOMA



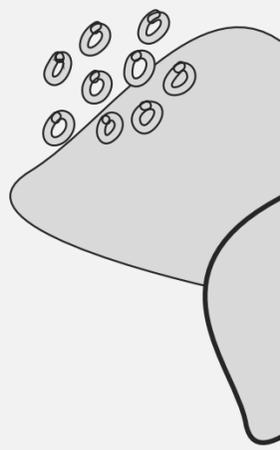
CLINICAL

- Regular screening of all cases with hypertension, diabetes, heart disease, and high lipids/ cholesterol for any symptoms suggestive of GLAUCOMA at least once a year.
- Linking suspected glaucoma patients to the Medical Officer at AB-HWC-PHC/OA at Vision Centres for screening for glaucoma (eye pressure test).
- Confirmed glaucoma cases will be referred by MO/OA for medical treatment and further management to higher facilities
- Regular follow-up of all diagnosed glaucoma cases to monitor that they are putting their eye drops regularly and also ensure that they are visiting the eye doctor as and when advised





ROLE OF CHO IN MANAGEMENT OF GLAUCOMA



PUBLIC HEALTH

- Make a list of all Vision Centers /Eye surgeons in the service area.
- Educate the community members that eye drops prescribed by a medical doctor for glaucoma need to be continued lifelong similar to taking medications for life in conditions like Diabetes and Hypertension.
- Health promotion activities for proper eye care, signs, and symptoms of glaucoma, and prevention of glaucoma.

MANAGERIAL

- Maintenance of records and registers.
- Ensuring sufficient stock of eye drops
- Regular supportive supervision of field staff who are monitoring these cases





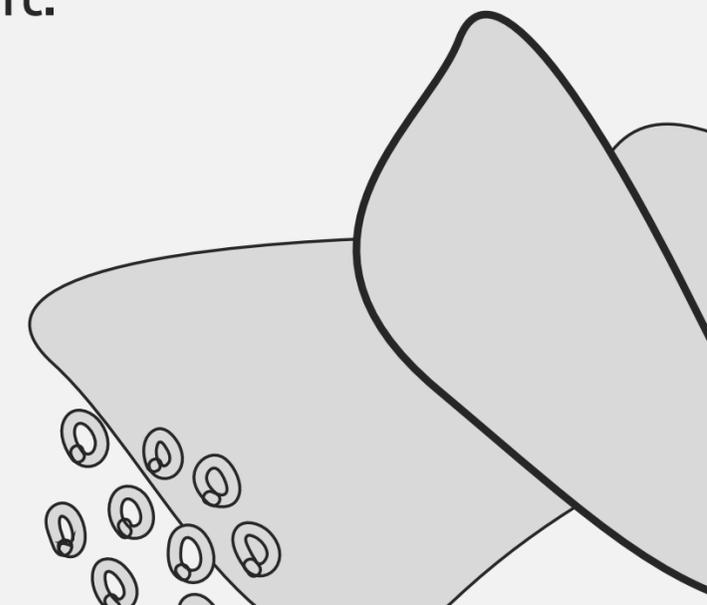
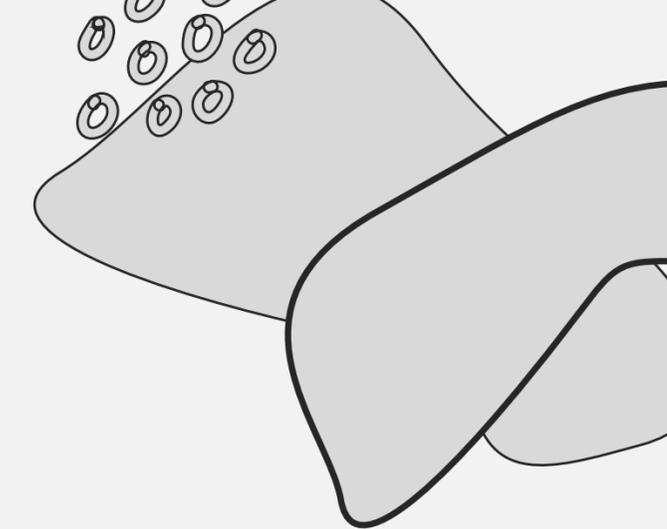
TRACHOMA

GROUP WORK

- There will be 6 groups
- Each group will get a set of questions
- Refer to the manual for the answers
- Select a spokesperson who will present the answers in the plenary

You will get 5 minutes for this exercise and 3 minutes to present.

Pg no: 40-42 in the CHO manual





Group 1: What is Trachoma? How is Trachoma spread?

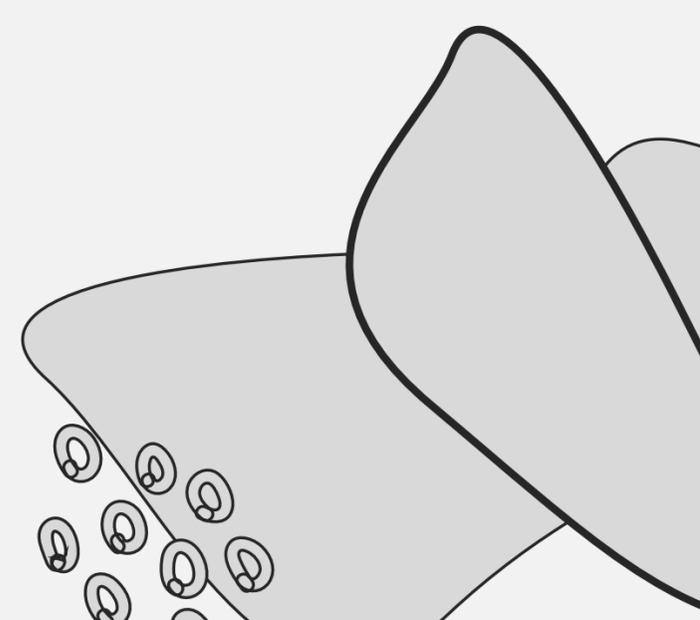
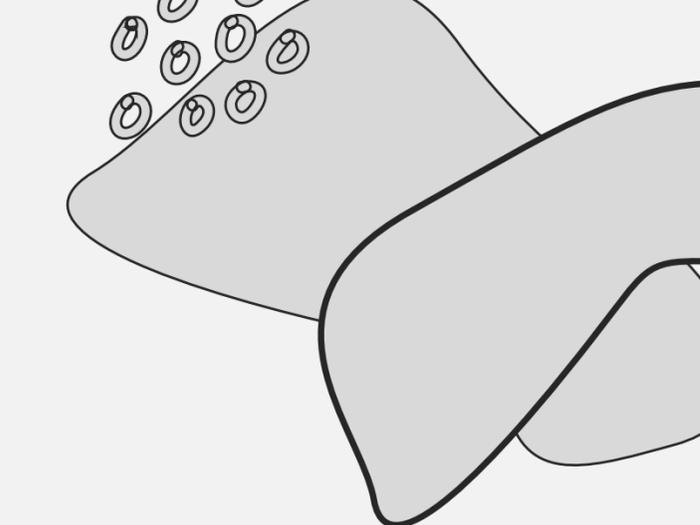
Group 2: What are the signs and symptoms of Trachoma?

Group 3: What is Trichiasis? Can trichiasis be prevented?

Group 4: Risk factors that spread Trachoma

Group 5: What is the treatment for Trachoma?

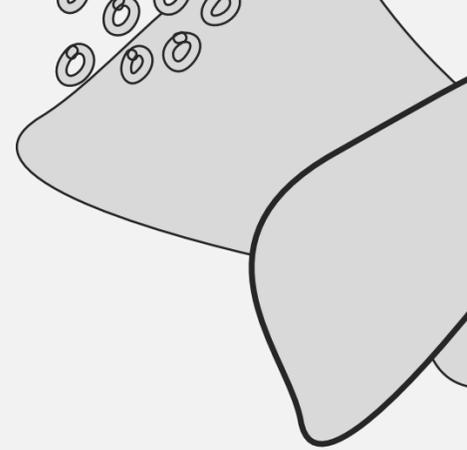
Group 6: Complications of Trachoma





BASICS OF TRACHOMA

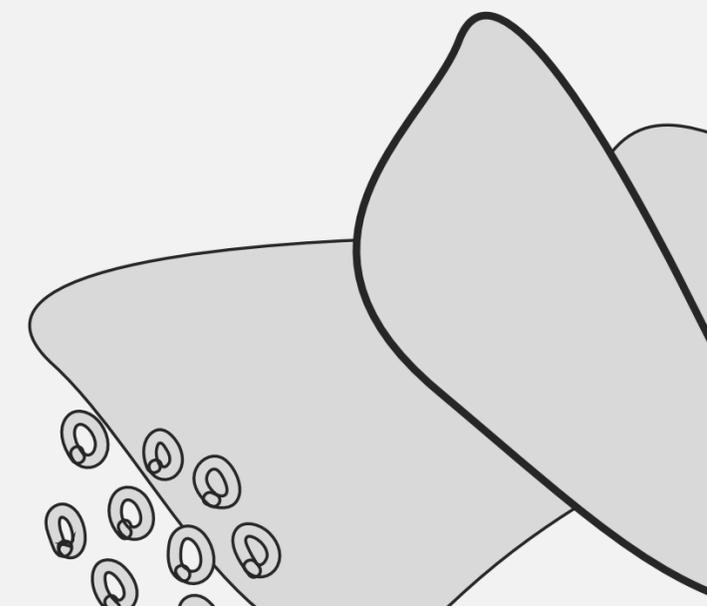
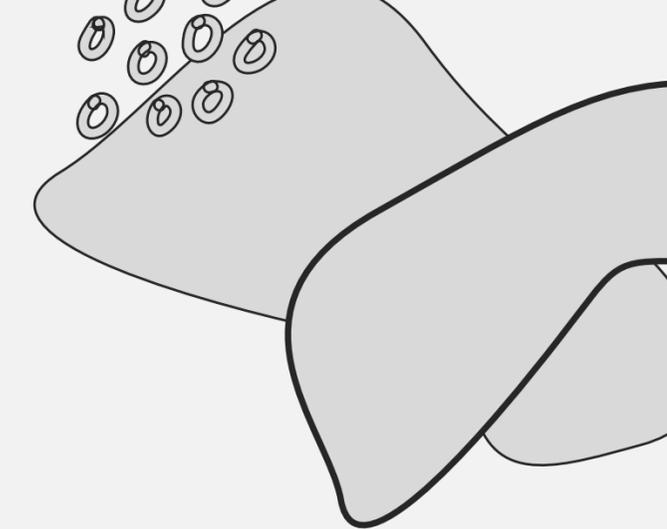
- Infection of the eye with Chlamydia Trachomatis
- Occurs in childhood
- Repeated infections earlier in life → scarring of conjunctiva → the eyelashes turn inwards rubbing against the front part of the eye → opaqueness (cloudiness), → blindness.
- Prevalent in the northern belt of India and Andaman and Nicobar Islands





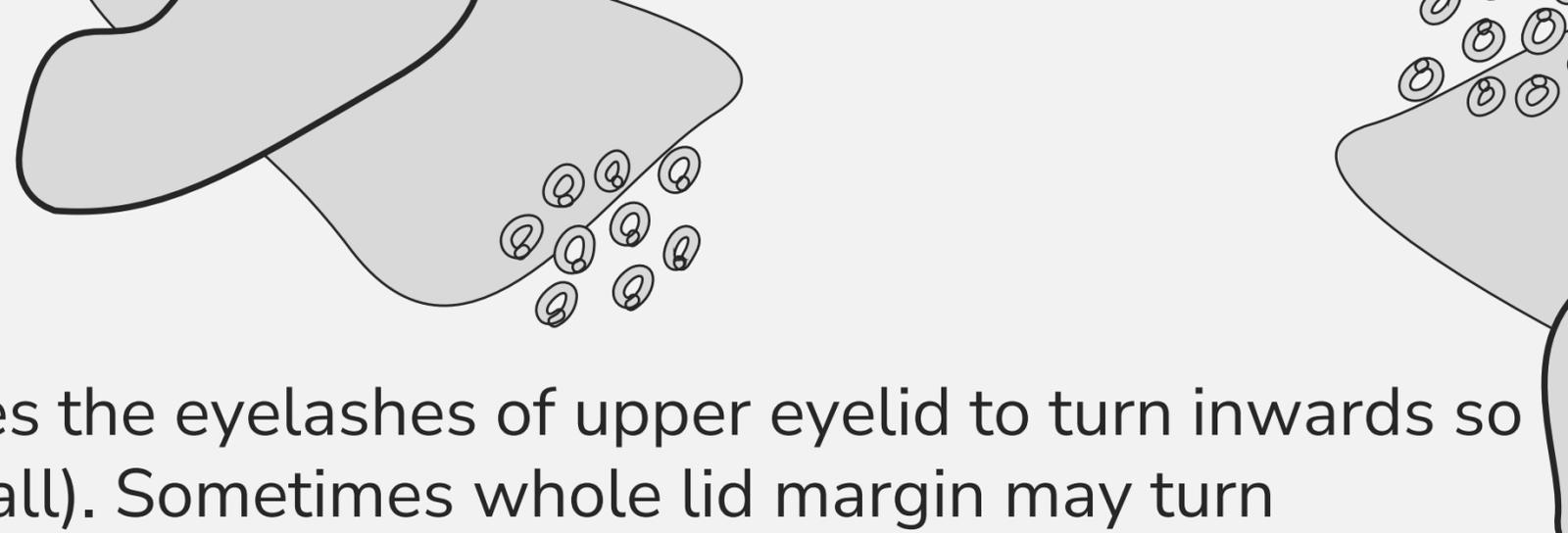
COMMON ROUTES OF TRANSMISSION ARE

- Close physical contact e.g., mothers of affected children
- Sharing towels, handkerchiefs, etc.
- Houseflies
- Coughing and sneezing





TRICHIASIS



The progress of infection of trachoma causes the eyelashes of upper eyelid to turn inwards so that the lashes rub against the globe (eyeball). Sometimes whole lid margin may turn inwards.

Prevention of Trichiasis

1. Promoting face hygiene among community members by regular bathing and face washing. Promote hand-washing with soap and clean water.
2. Promoting use of latrines and educating community members about harms related to open defecation.
3. Spreading the following messages amongst the community members:
 - a. Keep your environment clean.
 - b. Houses and surroundings should be kept free of breeding of houseflies. - garbage, manure, uncovered fruits and vegetables, open defecation areas, open drains, etc.
 - c. Maintain personal hygiene. Wash your face with clean water several times in a day. Keep separate towel, linens, handkerchief, etc. for each member of family and keep them clean.



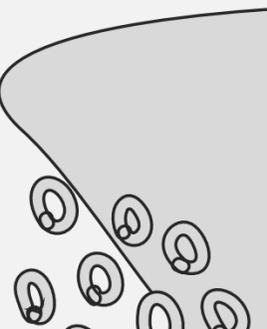
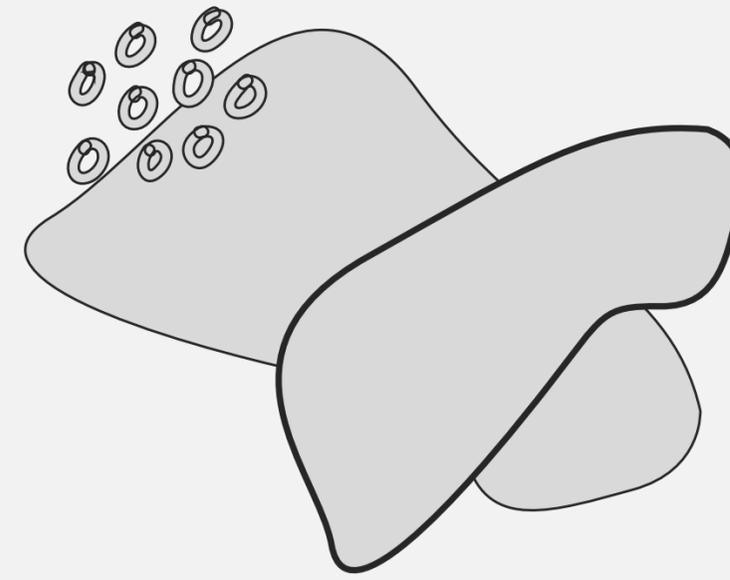


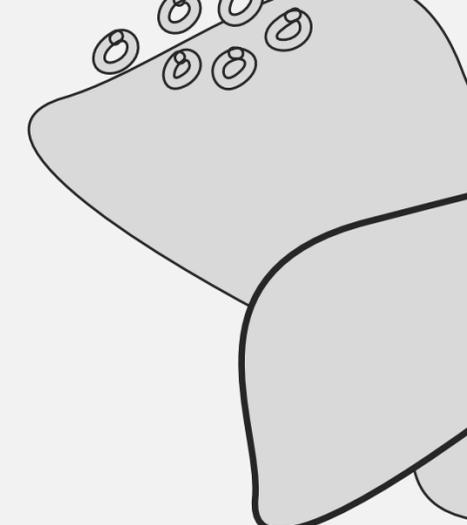
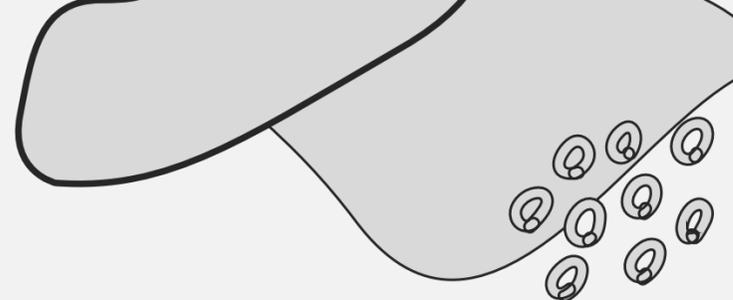
Risk factors which spread Trachoma

- Overcrowding
- Poor personal/environmental hygiene
- Shortage of water
- Inadequate latrines and sanitation facilities

Complications of Trachoma

- Constant rubbing of the eyelashes on the corneal surface lead to the formation of corneal ulcers, corneal scarring and eventually corneal opacities.





TREATMENT OF TRACHOMAS

- Promote hand and facial hygiene practices (personal hygiene) among individuals and the cleanliness of the environment.
- The inwardly turned eyelash can be easily removed by you/MPW (ANM) or the MO/OA on examination.
- You will refer patients with Trachoma/Trichiasis to MO at AB-HWC-PHC/OA at Vision Centre/Eye specialist at a higher health facility as appropriate for confirmation and treatment (in consultation with MO).
- Providing follow-up care for trachoma as advised at the referral center.
- Ensure adherence to treatment by the patient as advised by the doctor.



ROLE OF CHO IN MANAGEMENT OF TRACHOMA



- Linking suspected patients with Trachoma/Trichiasis to the Medical Officer at AB-HWCPHC/OA at Vision Centres/Eye doctor/Eye specialist at higher health centers for testing and treatment (refer to the MO at the AB-HWC-PHC;
- Undertake referral in consultation with MO; MO to also be informed regarding any visits to the health facility by the community members).
- Follow- up care of those diagnosed by referral center. Regular follow-up of all treated cases.
- Health promotion for good personal hygiene, facial cleanliness, and environmental hygiene and to report immediately for any symptoms.
- Maintenance of records and registers.

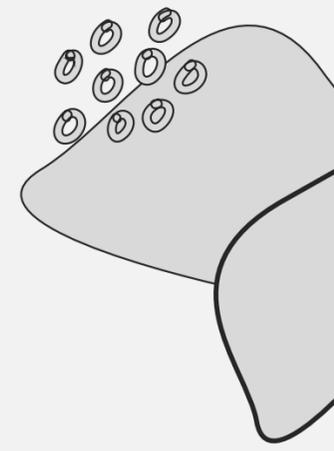


EYE INJURIES

Leading cause of blindness in children and young people (less than 25 years of age).

Most conservative treatments for standard eye complaints produce healing within 48 to 72 hours.

If severe, blindness may set very soon.





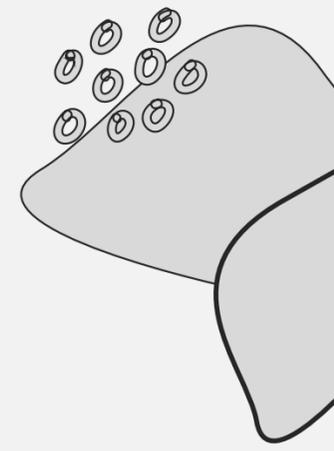
TYPE OF EYE INJURIES

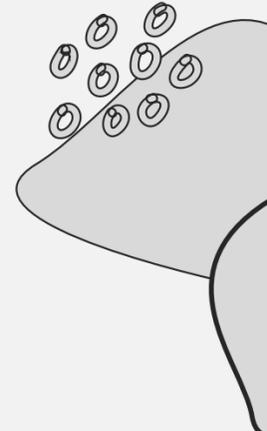
a) Mechanical trauma:

- Blunt trauma (most common) –some object hitting the eye
- Penetrating trauma

b) Chemical injuries

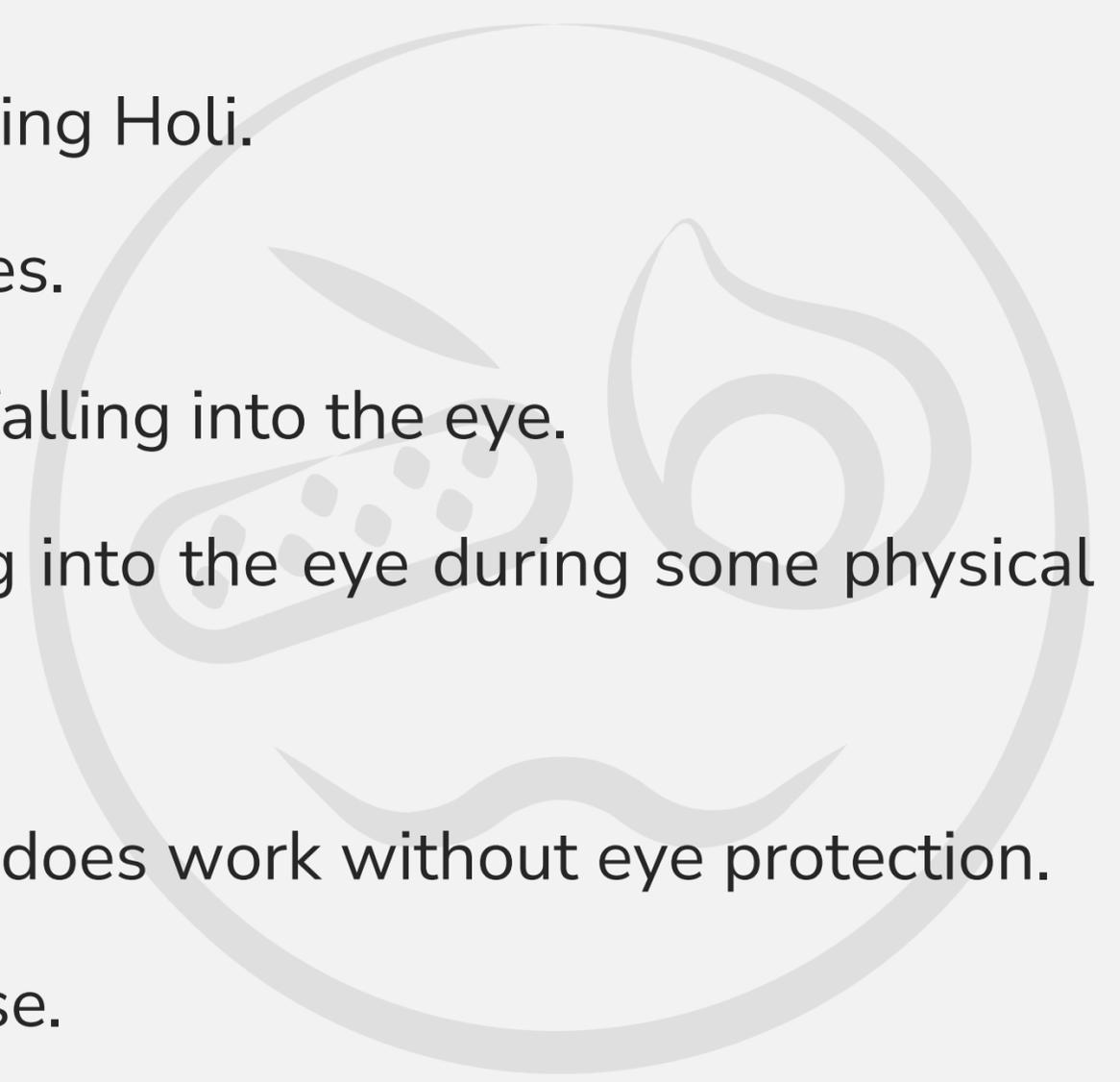
c) Radiation/Heat injuries





SITUATIONS LEADING TO EYE INJURY

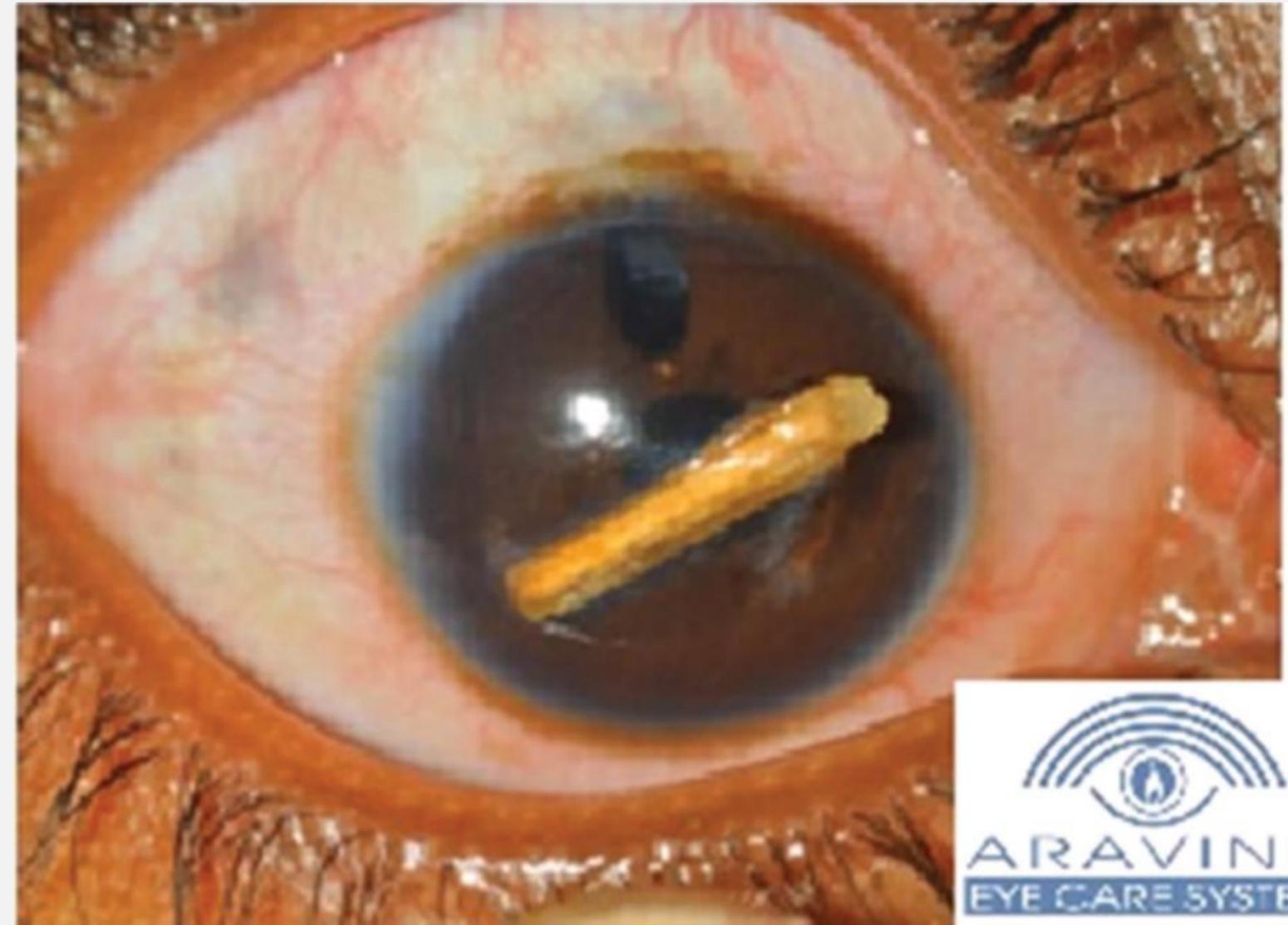
1. Chemical colors falling into the eyes while playing Holi.
2. During a physical fight or playing outdoor games.
3. Hot water burning the eyes or Diwali crackers falling into the eye.
4. Sharp objects or grain husks/small sticks going into the eye during some physical work e.g. cutting wood, farming season.
5. Ultra violet light enters the eye when a welder does work without eye protection.
6. Looking directly at the sun during a Solar Eclipse.





CLINICAL FEATURES OF EYE INJURIES

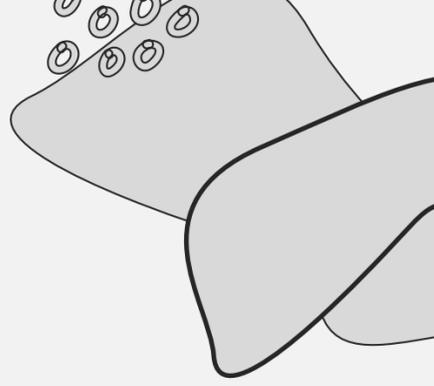
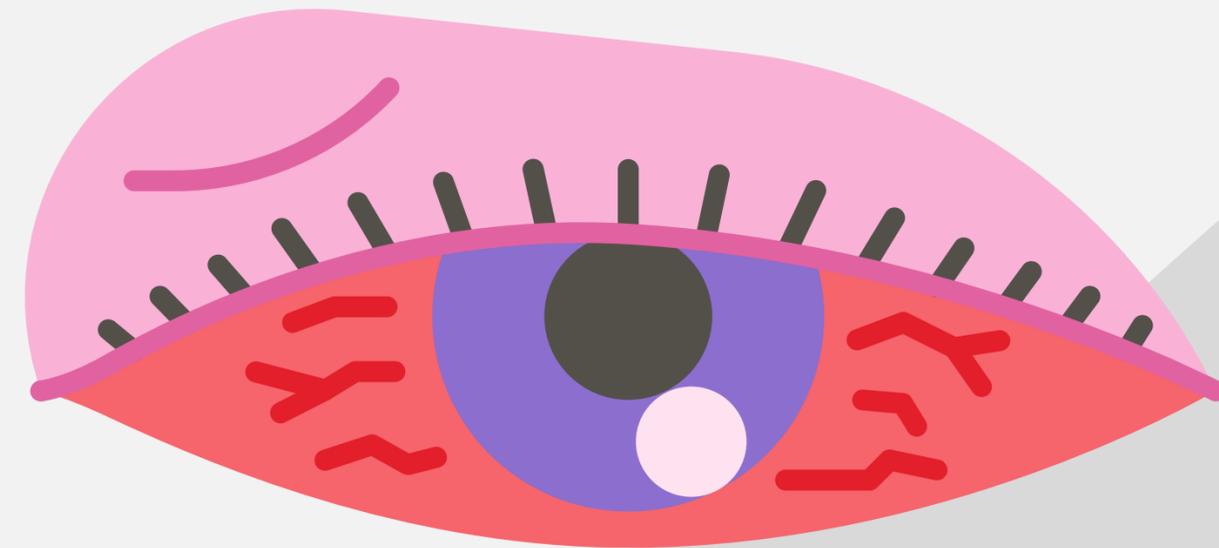
- Acute pain in the eye, may be associated with redness, cuts
- Diminished vision
- Photophobia
- Watering from eyes
- Injury to eyelids
- Other injuries on the face and Neck region





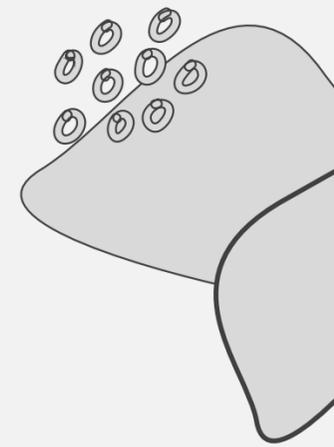
MANAGEMENT

- Take a brief history, noting the cause of injury, severity, and duration of symptoms, and any change in vision.
- Do a rapid examination
- Initiate the First Aid for a foreign body and eye injuries
- provide stabilization while arranging for transport of the patient to the nearest facility having an Eye Specialist

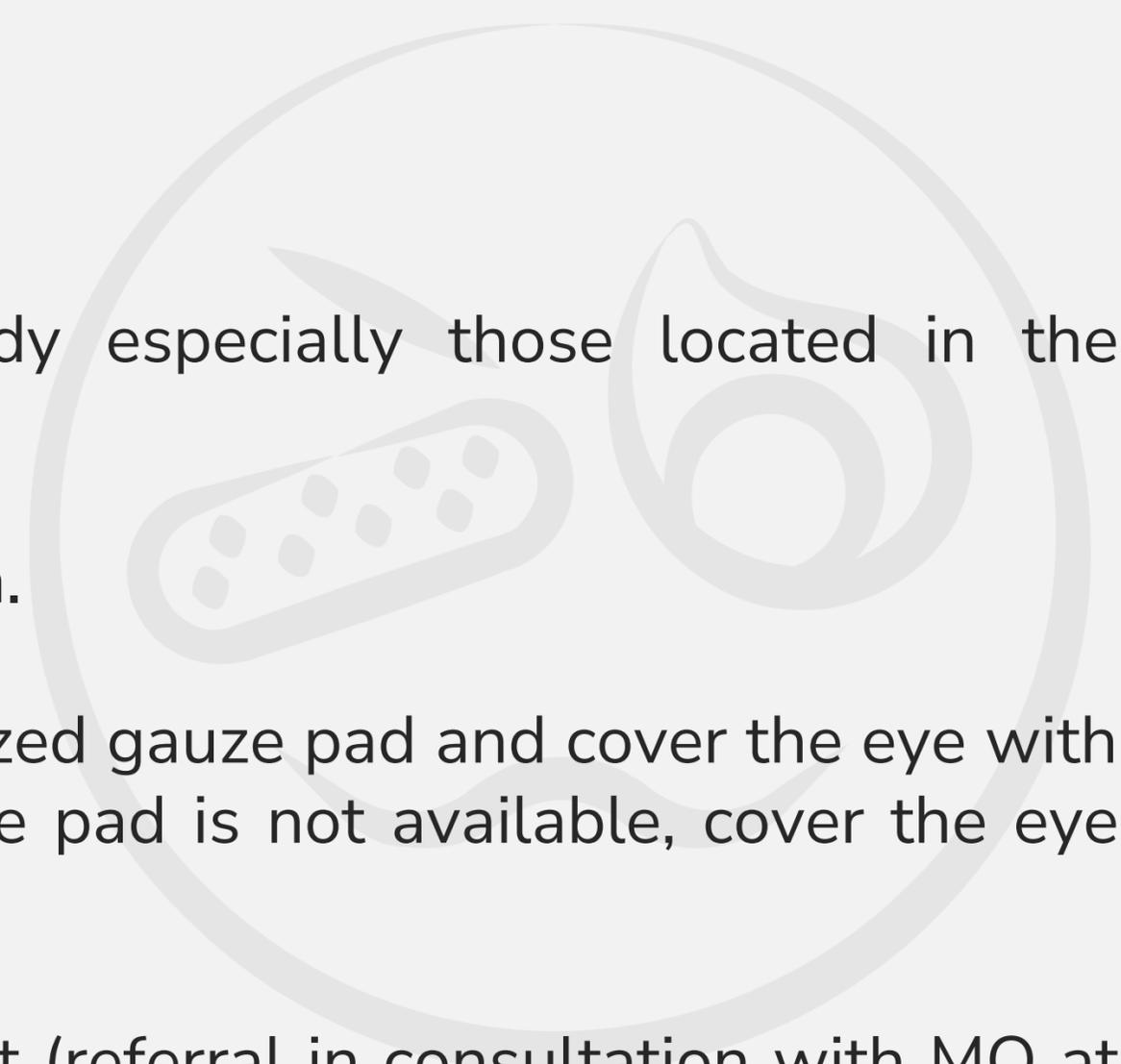




STEPS OF THE FIRST AID FOR FOREIGN BODY AND EYE INJURIES

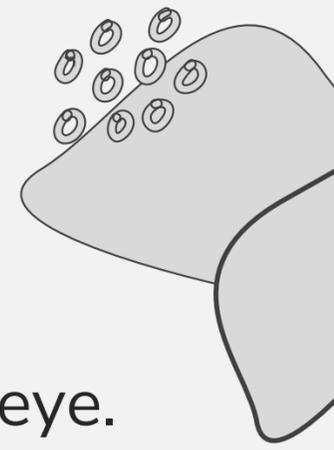


1. Wash eyes with clean and running water.
2. Do not rub the eye in case of foreign body.
3. Attempt to remove only superficial foreign body especially those located in the conjunctival sac of the eye.
4. Do not attempt to remove foreign body from cornea.
5. Stabilization and patch the affected eye with sterilized gauze pad and cover the eye with an eye shield, if available. In case, a sterilised gauze pad is not available, cover the eye with a clean cloth.
6. Refer to nearest facility having an Ophthalmologist (referral in consultation with MO at ABHWC- PHC).

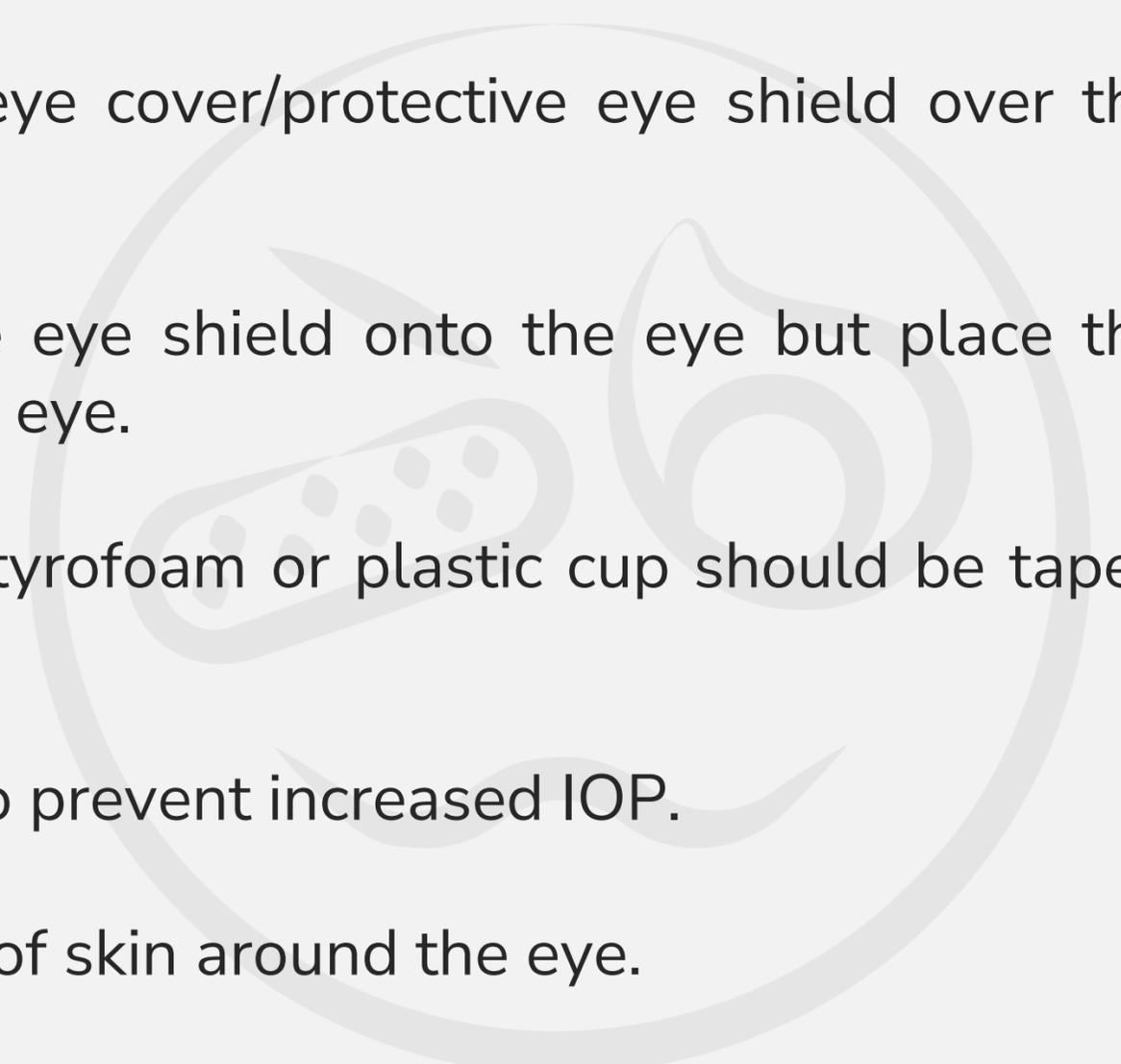




FOR PENETRATING INJURIES, TREATMENT BEFORE REFERRAL

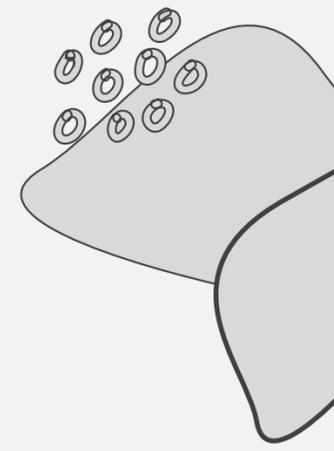


- a. Application of any external pressure to the eye must be avoided. Do not bandage the eye.
- b. Cover the injured eye with a clean cloth/eye pad/eye cover/protective eye shield over the affected eye for eye protection during transportation.
- c. Do not place any pressure points of the protective eye shield onto the eye but place the pressure points instead onto the bones surrounding the eye.
- d. If a metal or plastic eye shield is not available, a Styrofoam or plastic cup should be taped over the eye for protection.
- e. The head of the bed should be elevated if possible, to prevent increased IOP.
- f. Give tetanus toxoid injection, if there is any breakage of skin around the eye.
- g. As pain, agitation, uncontrolled hypertension, and Valsalva maneuvers can elevate IOP, appropriate analgesic, antiemetic and sedative therapy should be provided before referral.



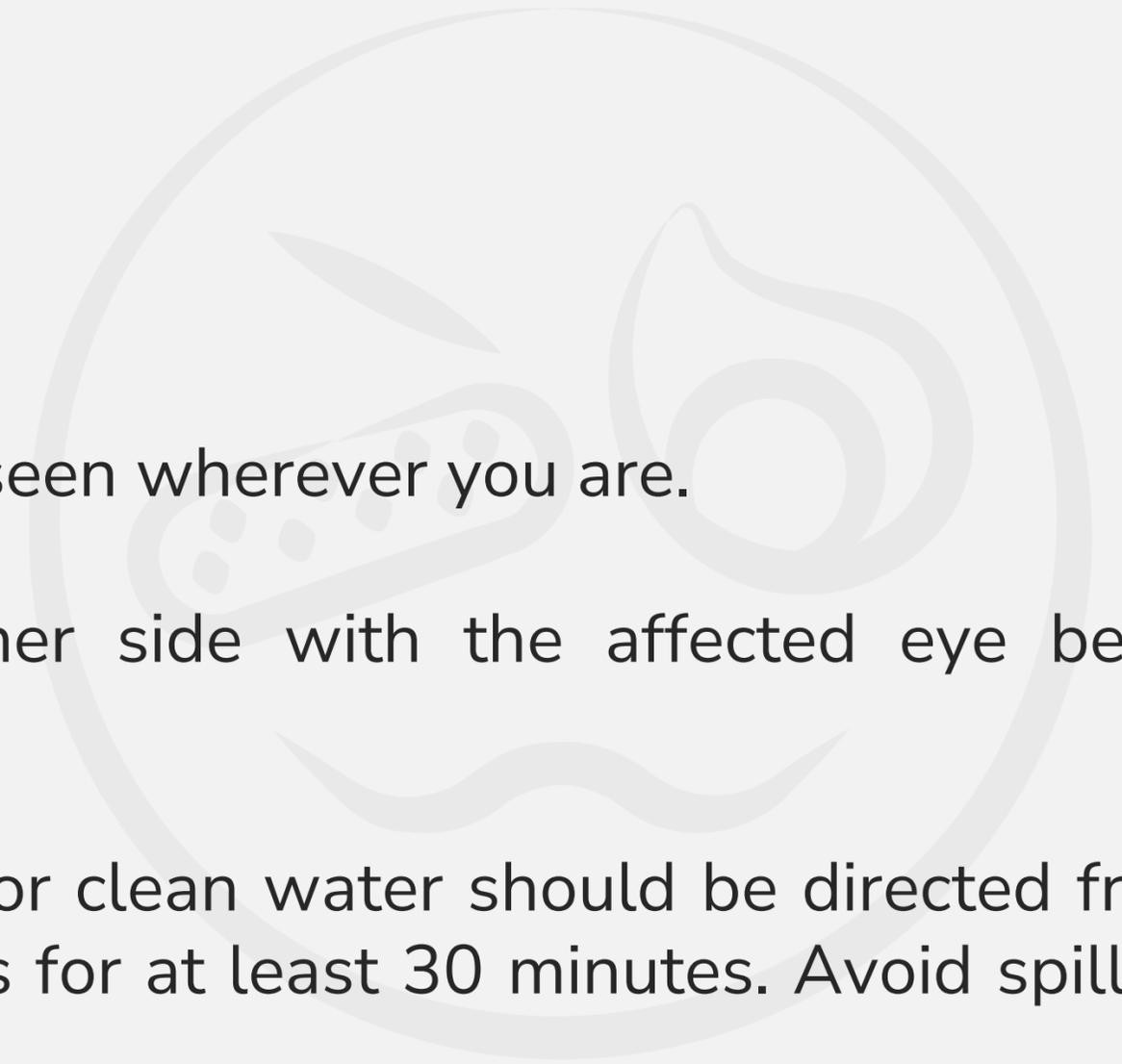


FOR CHEMICAL BURNS (ACID/ALKALI/CHEMICAL EXPOSURE), TREATMENT BEFORE REFERRAL



Do immediate and copious irrigation of the eye to dilute and remove as much of the chemical as possible.

- a. Wash your hands with soap and clean water.
- b. Wear gloves to do the treatment.
- c. Irrigation should begin as soon as the patient is seen wherever you are.
- d. The patient should be made to lie on his/her side with the affected eye being downwards.
- e. Irrigation using Normal saline/ Ringer's lactate or clean water should be directed from the nasal corner outward to wash away chemicals for at least 30 minutes. Avoid spilling over on unaffected facial area.





FOR CHEMICAL BURNS (ACID/ALKALI/CHEMICAL EXPOSURE), TREATMENT BEFORE REFERRAL



- f. If these solutions are not available to clean tap water for irrigation can be used.
 - g. Irrigation can be done through an intravenous cannula or nasal cannula tubing into the affected eye.
 - h. During the irrigation patient must be directed to look in all directions so that complete removal of chemicals from all the surfaces of the eye is ensured.
- An attempt should be made to identify the chemical in question and mention this information on the referral slip or telephonically.
- j. Refer immediately to an Eye specialist/Eye doctor (referral in consultation with MO at ABHWC- PHC).

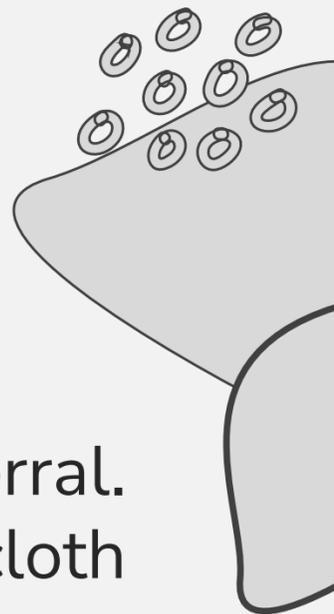




ROLE OF CHO IN MANAGEMENT OF EYE INJURIES



1. Take the brief history of the incident and the cause of eye injury.
2. Examine the eye to note the extent and depth of injury.
3. Give first aid for foreign body, and eye injuries, provide stabilization, and then referral. Washing the eyes in case of chemical burns and keeping them covered with a clean cloth till the patient reaches the treating doctor.
4. Linking individuals with eye injuries to the Medical Officer at AB-HWC-PHC/Eye doctor/ Eye specialist at higher health centers for treatment (refer to the MO at the AB-HWC-CPHC; undertake referral in consultation with MO;
5. Follow-up on all cases after treatment.





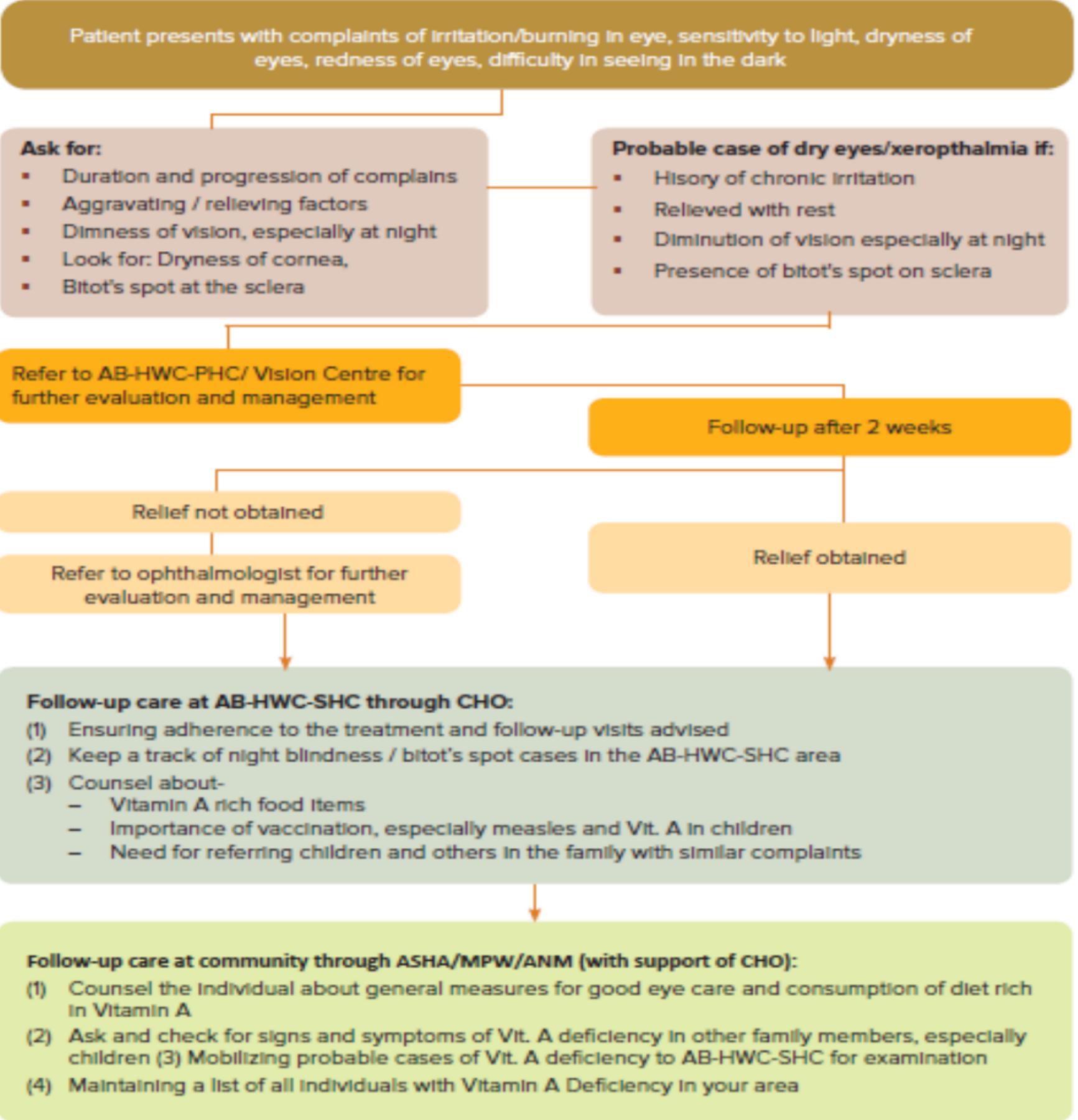
6. Raise awareness among community members about prevention of eye injuries at home, in the community and during festivals.

7. Supervise special festivals where eye injuries are common such as Holi and Diwali.

8. Promote use of protective eye glasses for farmers, those doing mechanical or welding work, use of helmets covered with front glass for those driving two-wheelers, educating community members to not look directly at the sun during Solar Eclipse, etc. The flying husk/small sticks of plants/any foreign body can enter the eye and lead to ulcers in the cornea and to blindness.

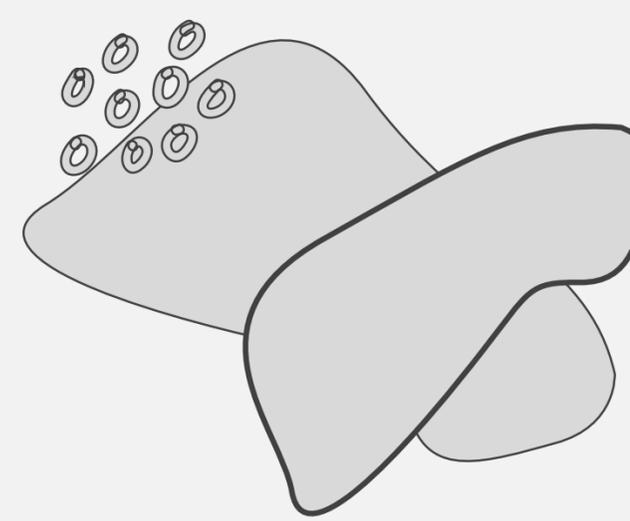
9. If you suspect any foul play and probable medico-legal case in any patient with eye injury, inform the Medical Officer at AB-HWC-PHC immediately.

10. Maintenance of records and registers.





EVALUATION

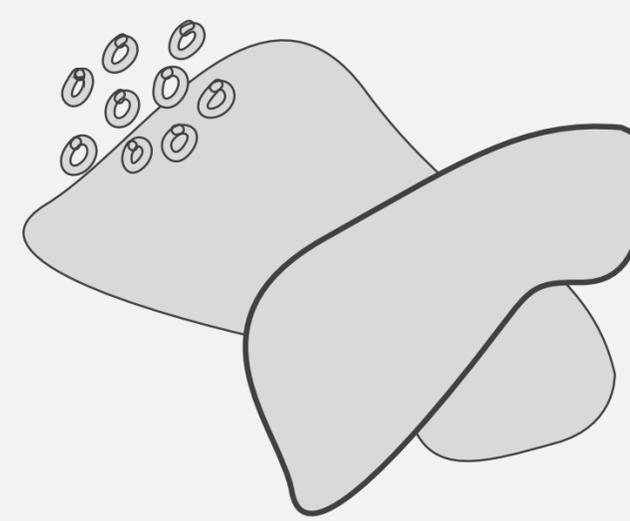


True or false:

1. Glaucoma can be treated with glasses
2. If a chemical liquid enters the eye, it is important to irrigate it as soon as possible
3. Trichiasis is seen in Vitamin A deficiency
4. Bitot spots are a sign of Vitamin A deficiency. The earliest symptom/sign is corneal ulcers
5. Trachoma is seen in childhood and is related to poor hygiene
6. Patients who have glaucoma require long term use of eye drops



EVALUATION

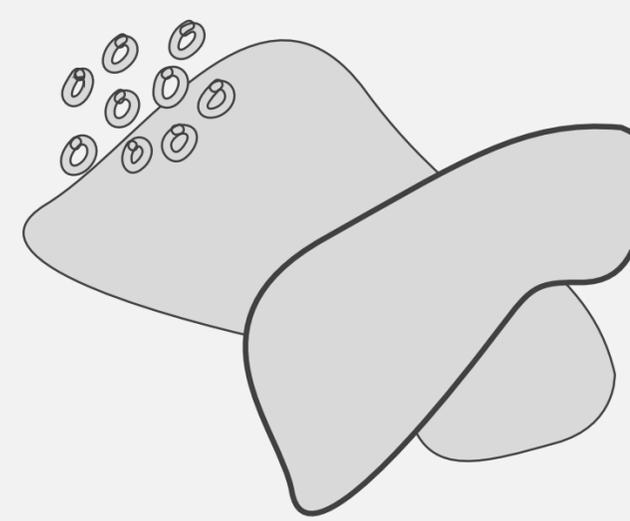


True or false:

1. Glaucoma can be treated with glasses **FALSE**
2. If a chemical liquid enters the eye, it is important to irrigate it as soon as possible **TRUE**
3. Trichiasis is seen in Vitamin A deficiency **FALSE**
4. Bitot spots are a sign of Vitamin A deficiency. The earliest symptom/sign is corneal ulcers **FALSE**
5. Trachoma is seen in childhood and is related to poor hygiene **TRUE**
6. Patients who have glaucoma require long term use of eye drops **TRUE**



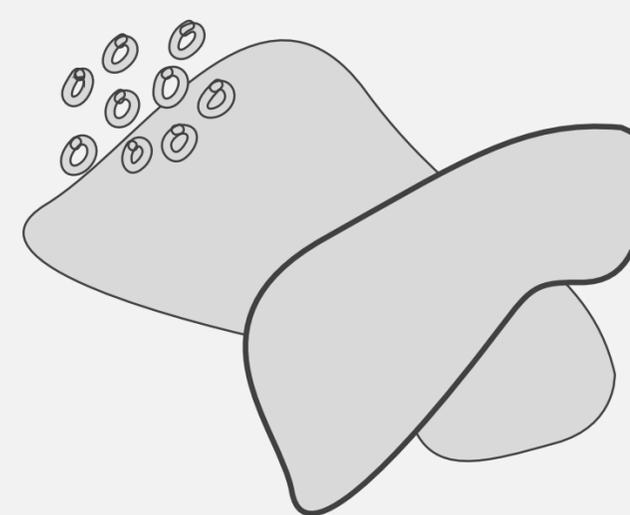
FILL IN THE BLANKS



1. There are 2 types of glaucoma - _____ and _____
2. Prevention of trichiasis is through messages focussing on _____ and _____
3. XS is a classification for this condition _____
4. 3 types/ causes of eye injury are _____, _____ and _____
5. The most important symptom in closed angle glaucoma is _____



FILL IN THE BLANKS



1. There are 2 types of glaucoma – open-angle and closed-angle.
2. Prevention of trichiasis is through messages focusing on personal hygiene and using toilets
3. XS is a classification for this condition corneal scar
4. 3 types/ causes of eye injury are mechanical, chemical and heat
5. The most important symptom in closed-angle glaucoma is severe pain



Thank You

