

OPHTHALMALIC TECHNIQUES

PART – I

FIRST AID

First aid treatment of all types of medical and surgical emergencies in addition to ocular emergencies such as follows:-

First Aid Management of Ocular Emergencies

- a. Removal of corneal foreign body
- b. Penetrating Injury of the Eye ball
- c. Laceration of the cornea
- d. Injuries of the eye lid
- e. Chemical Injuries of the eye
- f. Thermal Trauma
- g. Drug reactions
- h. Acute Congestive Glaucoma
- i. Retinal Detachment
- j. Acute Uveitis

MICROBIOLOGY

1. Introduction to micro-organisms
2. Classification of Bacteria
3. Structure and reproduction of bacteria
4. Characteristic of Rickettsiae
5. Transmission and diseases caused by Rickettsiae
6. Prevention and control of Rickettsiae
7. Characteristic of Chlamydiae
8. Transmission and diseases caused by Chlamydiae
9. Treatment, prevention and control
10. Characteristics of Spirochetes
11. Transmission, prevention and control
12. Diseases caused by Spirochetes
13. Composition and structure of Virus
14. Classification of Virus
15. Mode of Transmission and common diseases caused by Virus
16. Prevention and control
17. Characteristics of Protozoa
18. Biology and diseases caused by Protozoa
19. Prevention and control
20. Characteristics and reproduction of Fungi
21. Diseases caused by Fungi with reference to O.T.
22. Control and prevention
23. Sterilization and disinfection.
24. Introduction to Immunity and Immunology
25. Acquired Immunity and resistance factors
26. Methods of environmental cleanliness.
27. How to keep instruments, equipment's and other things bacteria free.
28. A brief introduction to Necrosis, Cell death, Inflammatory reaction, Hypersensitivity and Neoplasm.

OPHTHALMIC EVALUATION:

- a. Symptomatology of eye diseases
- b. Eye examination.
- c. History.
- d. Distant and close visual acuity.
- e. External examination.
- f. Use of the perimeter, Jerrum screen.
- g. Basis of FFA, Ultra sound.
- h. Measurement of IOP.
- i. Staining of Cornea.
- j. Syringing of lachrymal apparatus.

PREVENTIVE OPHTHALMOLOGY

- a. Common causes of total and partial blindness and their prevention e.g. Trachoma, Ophthalmic neonatorum, chronic simple glaucoma, vitamin A deficiency, Cataract and retinal detachment.
- b. Prevention of ocular injuries in industrial workers and radiant injuries.
- c. Prevention of amblyopia in children.
- d. Prevention of ocular diseases.
- e. A brief introduction to LASER and its uses in Ophthalmology. Special are of children with:
 - a. Ophthalmic diseases.
 - b. Ophthalmic care in school children.

LIST OF PRACTICALS

Ocular Emergencies Practical

Practical-1: Removal of conjunctival Foreign Body

- Indication
- Apparatus
- Procedure
- Results
- Precautions

Practical-II: First Aid Management of Ocular Emergencies

- k. Removal of corneal foreign body
- l. Penetrating Injury of the Eye ball
- m. Laceration of the cornea
- n. Injuries of the eye lid
- o. Chemical Injuries of the eye
- p. Thermal Trauma
- q. Drug reactions
- r. Acute Congestive Glaucoma
- s. Retinal Detachment
- t. Acute Uveitis

The student will have to cover following points for each of above and other eye emergencies / diseases:-

- Apparatus
- Procedure
- Results
- Precautions

Practical-III: Instillation of Eye Drops

- . For Treatment
- . For Anaesthesia
- . For Diagnostic Purpose
- . In Post Operative Cases

- Indication
- Apparatus
- Procedure
- Results

- Precautions
- Ophthalmic Evaluation/Community Ophthalmology

The students will have to do these two jobs in addition to following practicals:-

- To prepare community based messages for general Eye care
- To pick 50 cases from community with common eye problems, evaluation and management of these cases.

Practical-I

- **Perimetry:**

Indications
Types
Apparatus
Procedure
Precautions

- **Ophthalmoscopy:**

Indication
Types
Apparatus
Procedure
Precautions

- **Tonometry:**

Indications
Types
Apparatus
Procedure
Precautions

- **Biometry:**

Indications
Apparatus
Procedure
Precautions

- **Corneal Staining:**

Indications
Apparatus
Procedure
Precautions

- Eversion of Upper Eyelid
- Fluroscein Angiography
 - Indications
 - Apparatus
 - Procedure
 - Precautions