

OPHTHALMOLOGY

Total credits:

7

Theory credits:

3

Practical credits:

4

GENERAL OBJECTIVES

During the training period in ophthalmology, students will have to become familiar with the symptoms and signs most commonly observed in patients at ophthalmology appointments, with the diagnostic assessment of the urgent or non-urgent nature of the pathology and with the therapeutic orientation which will establish the regimen in which the patient should be assessed and treated (primary medicine, outpatient or inpatient regimen). Students must also have a knowledge of the usefulness of interconsultation in ophthalmology in the general context of hospitals and multi-disciplinary clinics.

SPECIFIC OBJECTIVES

At the end of the training process, students should:

*Be able to identify the main **problems** of ophthalmic pathology, specifically in:*

1. The most frequent ophthalmic emergencies: attitude that must be adopted.
2. Arranged ophthalmic consultations: evaluation of the most frequent clinical situations.
3. Ophthalmic manifestations of general diseases.

*Know the theoretical bases of the **diagnostic methods** in ophthalmic pathology, specifically in:*

1. Subjective examination: visual acuity and visual fields.
2. Objective examination of the anterior segment of the eye: slit lamp.
3. Examination of the posterior segment of the eye: direct ophthalmoscopy.

*Know the diagnosis and medical-surgical therapeutics of the principal **diseases** of the visual apparatus, specifically in:*

1. Refractive defects.
2. Diseases of the ocular adnexa.
3. Examination of the posterior segment of the eye.
4. Diseases of the posterior segment of the eye.
5. Diseases of the visual system and the ocular motor system.

*Have acquired the following **skills**:*

- Obtaining a detailed and correct ophthalmic anamnesis.
- Basic examination of visual function.
- Basic examination of the anterior and posterior segments of the eye.
- Interpretation of the findings made in the above sections.
- Elementary techniques in emergency ophthalmic procedures (extraction of superficial foreign bodies from the bulbus oculi, irrigation of chemical burns, etc.).

PROGRAMME

A. IDENTIFICATION OF PROBLEMS

1. The most frequent ophthalmic emergencies: attitude that must be adopted

Handling cases of sudden loss of vision, eye pain, myodesopsia, pink eye, etc.

2. Arranged ophthalmic consultations: evaluation of the most frequent clinical situations.

Handling cases of progressive loss of vision, ocular irritation, ocular deviation, tumefaction of the eyes or adnexa, etc.

3. Ophthalmic manifestations of general diseases

Ocular hypertension and vasculopathies. Diabetes mellitus and endocrinopathies. Infectious diseases. Hemopathies. Arthropathies. Others.

B. THEORETICAL BASES OF DIAGNOSTIC METHODS IN OPHTHALMIC DISEASES

1. Examination of visual acuity and visual fields

Use of optotypes for near and far vision; interpretation of campimetric defects according to the anatomy of the visual system.

2. Examination of the anterior segment of the eye with a slit lamp

Identification of the anatomical structures visible with the slit lamp and the most important complaints affecting the eyelids, conjunctiva, cornea, anterior chamber, uvea, crystalline lens, etc.

3. Examination of the posterior segment of the eye using a direct ophthalmoscope

Identification of the anatomical structures visible with the ophthalmoscope and the most important alterations of the papilla, macula, the rest of the retina and choroid, arteries and veins, vitreous humour, etc.

C. DIAGNOSIS AND TREATMENT OF THE PRINCIPAL DISEASES OF THE VISUAL APPARATUS

1. Refractive defects

Optical basis of refractive alterations. Guidance on the problems related to myopia, hypermetropia, astigmatism, etc.

2. Diseases of the ocular adnexa.

Physiopathology of the tear ducts and affections of the adnexa. Criteria for the conduct that should be adopted when dealing with the most important and frequent clinical situations.

3. Diseases of the anterior segment of the eye

Physiopathology of the circulation of aqueous humour and affections of the anterior segment. Criteria for the conduct that should be adopted when dealing with the most important and frequent clinical situations.

4. Diseases of the posterior segment of the eye

Physiopathology of retinal circulation and affections of the posterior segment. Criteria for the conduct that should be adopted when dealing with the most important and frequent clinical situations.

5. Diseases of the visual system and the ocular motor system

Physiopathology of the optic pathways, intrinsic and extrinsic ocular motility pathways and their respective affections. Criteria for the conduct that should be adopted when dealing with the most important and frequent clinical situations.

TEACHING STRUCTURE

THEORY CLASSES

I. The foundations of Ophthalmology

1. Concept and theory of ophthalmology.
2. The ocular apparatus and vision. General outline of the ocular structures and their functions.
3. Ontogeny and phylogeny of the ocular apparatus.
4. Ophthalmic optics.
5. Examination and semiology of the ocular apparatus.
6. General therapeutics.

II. Diseases of the ocular apparatus.

7. Congenital malformations of the ocular apparatus.
8. Ocular refractive disorders: hypermetropia, astigmatism and myopia.
9. Diseases of the eyelids.
10. Diseases of the lacrimal apparatus.
11. Diseases of the conjunctiva.
12. Diseases of the cornea.
13. Sclerotic diseases.
14. Diseases of the uvea.
15. Diseases of the crystalline lens.
16. Vitreous diseases.
17. Glaucoma.
18. Diseases of the retina.
19. Diseases of the optic nerve.
20. Chiasmatic syndrome. Retrochiasmatic syndrome. Pathology of the retrogeniculate optic pathway.
21. Pathology of intrinsic motility.
22. Pathology of extrinsic motility.
23. Binocular vision disorders.
24. Diseases of the orbit.

III. Ophthalmology and medicine

25. Ocular participation in diseases of the vascular and hemopoietic systems.
26. Ocular participation in diseases of the endocrine system.
27. Ocular participation in collagenosis and alterations in the immune system.
28. Ocular participation in diseases of the nervous system. Ocular manifestations of brain tumors. Ocular manifestations of cerebrovascular insufficiency.
29. Ocular participation in metabolic pathologies. Ocular manifestations in poisonings. Ocular participation in infectious diseases.
30. Ocular participation in pneumopathies, respiratory insufficiency and thoracic trauma.

PRACTICAL CLINICAL PROGRAMME

Seminars

1. Subjective examination: visual acuity and chromatic perception and visual field.
2. Objective examination: slit lamp and ophthalmoscope.
3. The guiding symptom.
4. Intraocular pressure and glaucoma.
5. Ocular trauma.
6. Infant ophthalmology.
7. Complementary diagnostic tools.
8. Ocular nervous system.

LEARNING REQUIREMENTS

To develop a satisfactory understanding of the anatomoclinical forms and physiopathological problems of ophthalmic affections, students will need the concepts acquired during the period of preclinical studies on the anatomy of the visual apparatus. Students will also need to have learned the concepts regarding the physiological and pharmacological bases of the organ of vision.