ЛД-16 ИН

Abstracts of lectures on ophthalmology for 4th year students of the faculty of medicine

Lecture 1.

Topic: Principles and methods of vision protection in children and adults. The role of the eye (part of the brain) in life. The role of light in the functioning of the optic-vegetative system of the photoenergy system. Connection of eye pathology with General diseases in children and adults. Philo-morphogenesis and anatomy of the organ of vision. Anomaly of development.

Plan of the lecture:

1. Introduction.
2. The eye and its role in the life of the body.
3. Achievements and unsolved problems in ophthalmology.
4. Formation of the organ of vision.
5. Age anatomy.
6. Physiology and functions of the components of the eye and its auxiliary apparatus.

Text material of the lecture: Introduction. The eye and its role in the life of the body. Eyes like link photovoltaic or opto-vegetative system of the body. The purpose of studying ophthalmology in the age aspect for the future daily activities of the doctor. The list of the main common diseases in children and adults, contributing to the emergence of a pathological process or manifested in the eye. Characteristics of achievements and unsolved problems in various fields of ophthalmology. The main directions and results of research, participation in solving these problems of the Department. Ethics and deontology in ophthalmology. Formation of the organ of vision. Conditions that ensure the development and functioning of the eye. Directions of development of the light-receiving apparatus. Differentiation of the visual apparatus, due to the living conditions of living beings. Stages of development of the visual analyzer, their duration. Physiology and functions of the components of the eye and its auxiliary apparatus. The state of visual functions in each of them. The role of heredity and other factors in the formation and development of the eye. Three links of the visual analyzer. Specific peripheral receptor, pathways, visual centers. The role of the visual analyzer, illumination, mobile lifestyle in human development and adaptation to the environment. Age anatomy. Forever. Anatomy and functions of eyelids. Anomaly of development. Lacrimal organs. Tear-producing apparatus. Tear pathways. The beginning of active functioning of the lacrimal gland. Anomalies in the structure of the lacrimal-nasal canal in newborns, their possible consequences. Conjunctiva. Anatomy, functions of the conjunctiva. Three departments, features of the structure of the conjunctiva in children. Properties of normal conjunctiva. The value of the features of the structure of the conjunctiva in pathology. Oculomotor apparatus. Topographic anatomy. Innervation, oculomotor muscle function. Eyeball. Age dynamics of the size, size, weight and shape of the eyeball. The outer shell of the eye: the cornea, its structure; chemical composition, size, curvature and function. Features of metabolic processes. The role of anatomical and physiological features of the cornea and its pathology. Anomaly of development. Sclera, its structure, topographic anatomy, functions. Limb, its topographic anatomy, features of the width and color of the limb in persons of different ages. Choroid. Departments of a vascular cover, two systems of blood supply of a vascular cover, anastomoses, collaterals between them. The importance of separate blood supply in the occurrence and spread of inflammatory diseases. Iris, age features of the structure of the iris. The role of the iris in the penetration of light flow to the retina, in ultrafiltration and outflow of intraocular fluid; ciliary body, its topographic anatomy, innervation and structural features, the role in the formation and outflow of intraocular fluid, in the act of accommodation, in thermoregulation, etc.; choroid, its structure. The role of the choroid in the implementation of the visual process, in the nutrition of the retina. Lens. Topographic anatomy. Structure and chemical composition, features of metabolic processes in the lens. Characteristics of the dynamics of refractive and accommodation functions of the lens in persons of different ages. Vitreous. Features of structure, chemical composition, functions. Anterior and posterior chamber of the eye. Topographic anatomy, depth of chambers in persons of different ages. Intraocular fluid, its chemical composition, the structure of the drainage system. Characteristics of the angle of the anterior chamber as the main path of outflow of intraocular fluid. Retina. Structure and function of the retina. Features of the retina in newborns, sensitive period. Two of the power supply system of the retina. Interaction of retina and choroid in visual act. Visual

pathway. Topographic anatomy, 4 parts of the visual pathway, features of the optic nerve disk in children. Chiasm, topography, the role of border formations in the development of pathology. The optic tract, and subcortical visual centers. Terms of formation of visual centers of the cerebral cortex. The topography of these formations and functions. Associative relations of field 17-18-19 with other fields (by Brodman). The role of the cerebral cortex in the visual act. Vessels and nerves of the eye and its accessory apparatus. Features of formation and function of cranial nerves and sympathetic innervation in children. The timing of functional development. Orbit. The structure, contents, topographical anatomy, function.

Control questions for self-training of students:

1. The paper plate of the lattice bone is part of the _____ wall of the orbit
2. For the medial adhesions of the eyelids is characteristic:
3. To the conjunctiva of the cartilage characterized by:
4. The lacrimal gland is located:
5. Posterior pole of the eye corresponds to the:
6. The cornea is shaped:
7. The surface of the sclera in an adult is _____ the surface of the eyeball.
8. The main function of the iris is:
9. The boundary separating the ciliary body from the choroid is:
10. Actually the vascular membrane is formed due to:
11. The blind part of the retina covers:
12. The cortical visual center is located in:
13. Anatomical structures, which are the boundaries of the anterior chamber, include:
14. Watery moisture from the rear chamber to the front penetrates through:
15. Blood supply to the lens is carried out by:

Literary source:

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Lecture 2.

Topic: Visual functions, starting at birth and in adults. Binocular nature of vision and its disorders.

Plan of the lecture:

1. Physiology of visual perception.
2. Visual function.
3. Acuity.
4. Color vision.
5. Field of view.
6. Chromatic sensitivity.

Text material of the lecture: Physiology of visual perception. The value of the structure of the light-receiving apparatus, the conditions of nutrition of the retina, the presence of vitamin "A", rhodopsin, iodopsin, selenium, hydrogen, etc., retinomotor, photochemical and bioelectric reactions. The role of the state of the pathways and visual centers in the act of vision. Visual function. Central vision (visual acuity, color vision), peripheral vision (field of vision, light perception); binocular character of vision. The sequence and timing of their development. Types and frequency of pathology. Light perception. Day, dusk and night vision; three features of twilight vision; speed of adaptation to light and darkness. Methods for determining dark adaptation. Types and frequency of pathology. Day-blindness. Peripheral vision. Age dynamics of the visual field, normal boundaries of the visual field on white and chromatic colors, physiological scotomas. Control and hardware methods of perimetry. The role of peripheral vision in the diagnosis of pathological processes in the eye and CNS. Color vision. Color and its main features; time of appearance of color vision in children and factors contributing to its development. Role Of M.V. Lomonosov and Helmholtz in the creation of the theory of color vision. Sopolimerizatsii tables Rabkin. Types of pathology. Early selection of the colors of the toys to the children. Acuity. The unit of its measurement, age-related evolution of visual acuity. Methods for determining visual acuity in people of different ages; definition of vision on the tables, control methods. Binocular character of vision. The General concept of monocular, simultaneous and binocular vision; the conditions necessary for the implementation of binocular vision. Time of appearance of binocular vision, the end of the formation of binocular vision. Methods for determining binocular fixation. Definition of binocular vision. Heterophoria. Imaginary squint. Concomitant strabismus. Accommodative strabismus. Alternating squint. Anisometropia. Non-accommodative strabismus. Partially accommodative strabismus. Braking scotoma. Amblyopia. Orthoptic and pleoptic treatment. Paralytic strabismus. Nystagmus. Local and common causes of binocular and stereoscopic vision impairment for career choice. The value of the state of visual functions during professional selection, labor examination.

Control questions for self-training of students:

1. List the departments of the visual analyzer:
2. What image is formed on the photoreceptors of the retina?
3. The transformation of the energy of the nerve impulse into visual sensation occurs in:
4. The angle of view with visual acuity 1.0 is equal to:
5. With visual acuity equal to 1.0, the patient in the Sivtsev table should read the optotypes of the _ _ _ series:
6. The apparatus in which the tables are placed for the study of visual acuity is called:
7. Long wavelength colors are:
8. With uniform irritation of all color-sensing components of the retina, the perception of _____ color is formed.
9. When the function of one of the three types of color-sensing components falls out, it is formed:
10. Both eyes, without moving, cover the horizontal field of vision in:
11. What diameter is preferable to choose the object when examining the perimeter of the field of view boundaries on the white color?
12. For the first time described a "blind spot»:
13. There are the following types of hemianopsia:
14. In the study of light perception on the table Kravkov-Purkinje first becomes visible _____ square:

15. Night blindness is most often observed in diseases of:
16. What is binocular vision?
17. What methods can detect the presence of binocular vision?
18. What are the most characteristic signs of friendly strabismus?
19. What are the characteristic signs of paralytic strabismus?

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Lecture 3.

Topic: optical system of the eye. Actual problems of clinical refraction. Correction of ametropia (spectacle, contact, laser, surgical).

Plan of the lecture:

1. The optical system of the eye.
2. The concept of physical refraction of the eye.
3. Characteristics of clinical refraction.
4. Emmetropia.
5. Hypermetropia.
6. Myopia.
7. Astigmatism.
8. Accommodation.
9. Anisometropia. Aniseikonia.
10. Correction of refractive errors.

Text material of the lecture: The doctrine of refraction. The optical system of the eye, its components. The unit of measurement of the refraction of the diopter. The concept of physical refraction of the eye and age dynamics of its development. Characteristics of clinical refraction and its types: emmetropia, myopia, hypermetropia. Astigmatism. Anisometropia. Aniseikonia. The concept of proportional and disproportionate clinical refraction (emmetropia, ametropia, anisometropia). Static and dynamic refraction. Emmetropia. Hypermetropia (farsightedness). Myopia (myopia). False myopia. Congenital and progressive myopia. Complications of high myopia. Correction of myopia. Astigmatism. Types of astigmatism. Features of glasses used to correct astigmatism. Contact lenses. Accommodation. The mechanism of accommodation. Convergence and its role in accommodation. Change of accommodation associated with age. Spasm and paralysis of accommodation, their causes. Visual fatigue (asthenopia). Presbyopia (age vision) and its correction depending on the initial clinical refraction and age. Hygiene of visual work in children and the elderly. Bifocals.

Control questions for self-training of students:

1. Focal length is called distance:
2. Clinical refraction depends mainly on:
3. Weak refraction in relation to a given size of the eye is called:
4. With uncorrected hypermetropia, the patient may complain about the presence of:
5. Deformation of the sclera in axial myopia is associated with:
6. With high degree of myopia occurs:
7. To prevent the progression of myopia it is necessary to apply:
8. The narrowing of peripheral vision in myopia is explained by:
9. Simple astigmatism is characterized by:
10. Correction of astigmatism is possible:
11. Different clinical refraction on different eyes is called;
12. Presbyopia occurs as a result of:
13. For the correction of presbyopia are used:
14. If the focus of the optical system coincides with the retina, then this type of clinical refraction is called:
15. To correct presbyopia, a 60-year-old hypermetrope in 3.0 D requires glasses in:

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Lecture 4.

Topic: diseases of eyelids, conjunctiva, lacrimal organs and orbit.

Plan of the lecture:

1. Pathology of the eyelids.
2. Anomalies of position and form century.
3. Inflammatory diseases of the eyelids.
4. Inflammation of the conjunctiva (conjunctivitis).
5. Pathology of the tear-producing apparatus.
6. Pathology of the lacrimal apparatus.
7. Inflammatory diseases of the orbit.
8. Endocrine ophthalmopathy.

Text material of the lecture: Eyelids. The frequency of diseases of the eyelids, the main types of pathological processes in the eyelids and their relationship with the General condition of the body. Treatment principles and outcomes. Blepharitis. The role of endogenous and exogenous factors in development. Clinic and course of blepharitis, complications, outcomes. Principles and duration of treatment. Demodex, diagnosis, treatment. Barley. Etiology, clinic, treatment, complications, outcomes. Abscess of the eyelids. Etiology, clinic, treatment, outcomes. A chalazion. Causes, clinic, differential diagnosis with adenocarcinoma of the meibomian glands. Principle of treatment. Molluscum contagiosum. Clinic, causes, tendency to dissemination, surgical treatment. Herpes simplex and shingles, vaccine pustules. Clinic, causes, treatment. Quincke's Edema. Toxicoderma. Medicinal dermatitis of the eyelids. The causes and characteristics of occurrence. Clinic, course, relapse rate, treatment principles. Differential diagnosis with renal and cardiac edema. Anomalies of position and form century. Causes (congenital and acquired). Ptosis, complications of ptosis. Eversion century. Trichiasis. Lagophthalmus. Ankyloblepharon. Coloboma of the eyelids. Epicanthus. The terms and principles of integrated treatment, symblepharon. Coloboma of the eyelids. Terms and principles of treatment.

Inflammation of the conjunctiva. The most common acute conjunctivitis. Pathogens. The main subjective and objective signs of conjunctivitis. Differential diagnosis. Methods of diagnosis of conjunctivitis. Age features of etiology and clinic of conjunctivitis. The average duration of various inflammatory diseases of the connective tissue membrane of the eye. Principle of treatment. Microbial acute conjunctivitis. Acute conjunctivitis caused by staphylococci, streptococci. Clinic, course, complications, treatment and prevention. Epidemic conjunctivitis (Koch-wicks). Features of clinical course. Epidemiology, seasonality, prevalence in regions with hot climate. Features of the course in young children. Treatment. Public and personal prevention. Pneumococcal conjunctivitis. Clinic, current. Features of manifestation in children. Treatment and prevention. Gonococcal conjunctivitis (newborn children and adults). Ways of infection, features of clinical course, complications. Diagnostic method. Treatment and prevention. Diphtheria conjunctivitis. Way of infection. General condition of the body. Clinic, course, complications. Diagnostic method. Emergency. Treatment and prevention. Viral conjunctivitis. Frequency in adults and children. The main types of pathogens. Features of the course of viral conjunctivitis. Adenovirus conjunctivitis. Epidemiology, contagiousness. Pharyngoconjunctival fever. Three forms of adenovirus conjunctivitis. Differential diagnosis with microbial conjunctivitis, trachoma. Diagnostic method. Principles of treatment and prevention. Allergic conjunctivitis. Causes, clinical features, course, principles of treatment. The most frequent forms. Chronic conjunctivitis. Etiological significance of exogenous and endogenous factors. Clinic, course, methods of treatment and prevention. Chronic conjunctivitis as an occupational disease. Trachoma. Social significance of trachoma. The prevalence of trachoma in the world. International classification WHO. Etiology and epidemiology of trachoma. The clinical course of trachoma into four stages, the forms of trachoma. Corneal trachoma, species of trachomatous pannus. Complications of trachoma. Features of the course of trachoma in children. The diagnosis is clinical, laboratory. The differential diagnosis of trachoma with paratrahome and adenoviral keratoconjunctivitis, etc. Medical treatment of trachoma. Complex medical-mechanical (expression) and surgical treatment. Principles of drug therapy: broad-spectrum antibiotics, sulfonamides, long-acting drugs, corticosteroids. General, local, combined therapy. Criteria of cure, the procedure for deregistration.

Pathology of the tear-producing apparatus. Congenital abnormalities of the lacrimal gland. Clinic, principles of treatment. Dacryoadenitis. Etiology, clinic, diagnostic methods, course, complications. Principle of treatment. Sjogren's Syndrome. Clinic. Simultaneous defeat of salivary, bronchial glands,

gastrointestinal tract, joints. Diagnostic method. Methods of therapy. The role of a General practitioner in the timely diagnosis and complex treatment of Sjogren's syndrome. Pathology of the lacrimal apparatus. Congenital and acquired changes in the tear ducts. Absence or dislocation of tear points; narrowing or obliteration of the lacrimal tubules; diverticula of the lacrimal sac; stenosis of the lacrimal canal. Diagnostic methods, principles and terms of surgical treatment. Dacryocystitises. Dacryocystitis of newborns. Clinical signs, causes and time of occurrence. Methods of diagnosis and treatment, possible complications. The chronic dacryocystitis. Clinic, causes, course, complications. Methods of surgical treatment. Prevention. Dacryocystitis acute (phlegmon of the lacrimal sac). Clinic, course, outcomes. Principles of treatment and prevention.

Acute inflammatory diseases of the orbit. Cellulitis, or cellulitis of the orbit. Subperiosteal abscess. Chronic inflammatory diseases of the orbit. Pseudotumor. Sarcoidosis. granulomatosis. Endocrine ophthalmopathy. Thyrotoxic exophthalmus. Edematous exophthalmos. Endocrine myopathy. Parasitic diseases of the eye socket. Echinococcosis of the orbit. Ascariasis of the eye socket. Filariasis of the orbit.

Control questions for self-training of students:

1. Congenital shortening of the eye slit in the horizontal Meridian is called:
2. In congenital ptosis, surgical treatment is mainly carried out with _____ age:
3. The morax-Axenfeld wand causes _____ blepharitis:
4. Acute purulent inflammation of the hair follicle or sebaceous gland of the eyelid is called:
5. The main symptoms characteristic of eyelid eversion:
6. Manifestations of congenital anomalies of the lacrimal gland are possible in the form of:
7. In the treatment of dacryoadenitis justified appointment:
8. Mikulich's disease is:
9. Congenital abnormality of the tear ducts is not:
10. The cause of dacryocystitis is most often:
11. What are the types of injection of eyeball:
12. Acute epidemic conjunctivitis is caused by:
13. To prevent gnobleniya babies are being used instillation:
14. What are the most characteristic signs of adenovirus conjunctivitis:
15. The fusion of the conjunctiva of the eyelids with the conjunctiva of the eyeball is called:
16. What are the main symptoms of eye diseases?
17. What are the clinical signs of orbital phlegmon?
18. What changes of the eye socket occur in endocrine diseases?

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Lecture 5.

Topic: Diseases of the cornea and the vascular membrane of the eye.

Plan of the lecture:

1. Congenital abnormalities of the cornea.
2. Inflammation of the cornea (keratitis).
3. Outcomes of corneal diseases and their treatment.
4. Congenital malformations of the vascular membrane.
5. Classification of uveitis.
6. Inflammation of the vascular tract (uveitis).
7. Severe outcomes of vascular diseases as a cause of low vision and blindness.
8. Dystrophic diseases of the iris and ciliary body.

Text material of the lecture: Congenital abnormalities of the cornea. Micro - and microcornea, keratoconus and cheratoglobo. Visual functions in developmental abnormalities. Surgical treatment. Contact correction capabilities. Outcomes. Inflammation of the cornea. Classification of keratitis by etiology, severity and localization of the process. The most common keratitis in children and adults. Diagnostic method. The main subjective and objective signs of keratitis. The average duration of the flow of the different keratitis. Principle of treatment. Outcomes. Superficial marginal keratitis. Complications of acute conjunctivitis. Factors contributing to the occurrence, clinic, course, treatment, outcomes, prevention. Corneal ulcer (creeping ulcer of the cornea). Etiology, clinic, stages, course, treatment, outcomes, complications. Physiotherapeutic methods of treatment. Herpetic keratitis. The frequency of the disease in adults and children. Properties of pathogens of herpes keratitis, pathways into the body; factors contributing to the activation of the herpes virus in the body of adults and children. General symptoms of herpetic keratitis. Features of the clinic and course of primary and post-primary herpetic keratitis. Surface forms of herpetic keratitis: vesicular, tree. Materpiece keratitis. Deep forms of herpetic keratitis. Natural involvement in the pathological process of the iris, ciliary body, optic nerve. Keratitis caused by herpes zoster virus. Clinic lesions of the skin of the eyelids, face, head, eyes. The severity of the pain syndrome in this disease, the defeat of the trigeminal nerve, the change in the General state of the body. Methods of diagnosis of hermetic keratitis: clinical, laboratory-Cytology scraping from the conjunctiva, the method of fluorescent antibodies-MFA, focal test with herpes vaccine. Differential diagnosis. Specific and nonspecific antiviral agents, immunotherapy, physical methods, surgical treatment. Prevention. Possibilities of anti-relapse therapy of herpetic keratitis. Tuberculosis-allergic keratitis. Clinic diffuse, focal, sclerosing forms. Laboratory diagnostics. Principles and duration of local and General treatment. Spa treatment. Outcomes. Syphilitic (deep) and tuberculous (hematogenic) keratitis. Clinic. Differential diagnosis between deep tuberculous and syphilitic keratitis. Comprehensive General and local treatment. Outcomes. The importance of occupational hazards in the occurrence, course and recurrence of keratitis. The role of professional selection, systematic professional examinations in the prevention of corneal diseases. Outcomes of corneal inflammation. Spot, cloud, eyesore simple and complicated and other types of turbidity and changes in shape. Incorrect astigmatism. Principle of treatment. Types of keratoplasty. Contact lenses. Keratoprosthesis. Excimer lasers.

The frequency of diseases of the vascular tract among the General eye pathology. Severe outcomes of vascular diseases as a cause of low vision and blindness. The structure of diseases of the vascular tract (inflammatory, dystrophic processes, tumors, congenital anomalies). Inflammation of the vascular tract. The most common causes of uveitis in people of different ages. Classification of uveitis by course, localization, clinical and morphological picture, etiology, immunology. The main morphological, functional signs and mechanisms of development of anterior uveitis; posterior uveitis; panuveitis. Differential diagnosis of vascular diseases depending on their etiology by clinical, laboratory, radiological, electrophysiological and immunological picture. Organization, principles, methods of General and local treatment of anterior and posterior uveitis depending on the etiology and nature of the process. Outcomes. Prevention. Dystrophic diseases of the iris and ciliary body. The frequency of the disease. Causes. Forms. Differential diagnosis with anterior uveitis. Clinic, course, principles of treatment. Congenital anomalies of development. Residual pupillary membrane, polycoria, corectopia, coloboma, aniridia. Clinic, diagnosis, state of visual functions in them. The possibility of treatment.

Control questions for self-training of students:

1. The most rare congenital corneal change is:
2. The presence of an enlarged cornea in diameter can be a sign of the presence of:
3. Corneal syndrome.:
4. Vascularization of the cornea is called:
5. For exogenous keratitis include:
6. How can you determine the integrity of the cornea?
7. Corneal erosion is a defect:
8. The causative agent of a creeping ulcer of the cornea is never:
9. Congenital anomalies of the iris include:
10. According to the clinical and morphological picture distinguish uveitis:
11. For the clinic of iridocyclitis is characteristic:
12. Iridocyclitis is more common _____injection of the eyeball:
13. The narrowing of the pupil in a patient with iridocyclitis can be explained:
14. When the pupil dilates in the case of iridocyclitis, it may have an irregular shape due to:
15. The appearance of hypopion in the anterior chamber of the eye in iridocyclitis is caused by:
16. Pupil fusion in iridocyclitis leads to:

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Lecture 6.

Topic: Diseases of the retina and optic nerve. Eye manifestations of the most frequent common diseases of people of different ages, radiation lesions.

Plan of the lecture:

1. Classification of diseases of the retina.
2. Acute obstruction of the Central artery of the retina and its branches.
3. Thrombosis of the Central retinal vein and its branches.
4. Retinal changes in General diseases.
5. Retinal changes in toxicosis, pregnancy.
6. Inflammatory diseases of the retina.
7. Retinal dystrophy.
8. Retinal detachment.
9. Optic neuritis.
10. Congestive optic disc.
11. Optic atrophy.

Text material of the lecture: Classification of retinal diseases, vascular diseases, dystrophic processes, congenital anomalies of development. General characteristics of pathological changes in blood vessels and retinal tissue. Diseases of the retina in General and local pathology. Acute obstruction of the Central artery of the retina and its branches. Etiological significance of rheumatic heart lesions, atherosclerosis, obliterating endarteritis, sepsis, air and fat embolism in diagnostic studies, pneumothorax, bone fracture. Ophthalmoscopic picture, dynamics of visual functions. Emergency care, the timing of its provision. Treatment, outcomes. Thrombosis of the Central retinal vein and its branches. Etiological significance of diseases: atherosclerosis, infectious and septic diseases of the body, coagulopathies, tumors of the orbit, injuries. Ophthalmoscopic picture, dynamics of visual functions. Complications. Treatment methods (principles of anticoagulant therapy, organizerdelete). Outcomes. Retinal changes in hypertension and atherosclerosis. Pathogenesis, clinical picture of different stages of hypertensive retinopathy, age-related features of ophthalmoscopic picture. Complications, outcomes. The importance of fundus examination for diagnosis, evaluation of treatment effectiveness, disease prognosis and prevention of complications of the underlying disease. Retinal changes in kidney disease. Clinic, complications, outcomes, the value of ocular symptoms to assess the effectiveness of treatment and prognosis of the underlying disease. Retinal changes in collagen diseases. Ophthalmoscopic picture, dynamics of visual functions, treatment and outcomes. Changes in the retina in diseases of the blood and hematopoietic system. Clinic, complications, outcomes, the value of ocular symptoms to assess the effectiveness of treatment and prognosis of the underlying disease. Retinal changes in diabetes. Clinical picture of different stages of fundus changes in diabetes mellitus, complications, outcomes. Principles of modern treatment of diabetic retinopathy. Retinal changes in toxicosis, pregnancy. Clinic, complications, outcomes. The importance of fundus examination to determine the tactics of a woman during pregnancy and childbirth by an obstetrician-gynecologist. Retinal changes in infectious, viral, parasitic diseases and sepsis. Clinic, treatment, outcomes of retinal changes in influenza, malaria, rickettsiosis, toxoplasmosis. Etiology, clinic, complications of metastatic retinitis. Treatment. Outcomes. Changes in the retina as a complication of a common drug therapy. Side pharmacological effect of ganglioblockers, ergot preparations, as a cause of acute occlusion of the Central retinal artery. Toxic effect of drugs rauvolfii, iodine, sulfonamides, phenylbutazone, as the cause of retinal hemorrhages, and antimalarial drugs, aminazine derivatives, as the cause of retinal dystrophy. Periflebit retinal (disease of the eels'). The role of tuberculosis, toxoplasmosis, allergies in the development of the disease. Clinic, treatment, complications, prognosis. External exudative retinitis (Coates disease). Clinic, differential diagnosis with retinoblastoma. Treatment, prognosis. Retinopathy of prematurity. Retrolental fibroplasia. The role of inadequate oxygen content in the air of cuvettes for premature infants in the occurrence of this pathology. Clinic depending on the timing and stage of manifestation of the disease, weight. Differential diagnosis with retinoblastoma and Coates disease. Treatment. Forecast. The role of micropedia in the prevention of disease. Pigmentary degeneration of the retina. Terms of manifestation of the disease, ophthalmoscopic picture, the dynamics of the fall of visual functions. Methods of diagnosis and treatment. Forecast. Macular degeneration of the retina. The role of the hereditary factor, the time of manifestation of the disease in children and adults. Ophthalmoscopic picture, dynamics of visual functions. Treatment. Forecast. Retinal detachment. Etiology in children and

adults. The role of rupture localization in the clinical course of the disease. Ophthalmoscopic picture, dynamics of visual functions. Terms and methods of surgical interventions, the role of photo-and laser coagulation in the treatment of the disease. Outcomes.
The most common diseases of the optic nerve in children and adults. Optic neuritis. Clinic. Classification. The etiology of optic neuritis in individuals of different ages. Pathomorphology. Principle of treatment. Outcomes. Forecast. Toxic neuritis, features of the course, treatment, prognosis. Neuritis. Ophthalmoscopic picture and state of visual functions. Frequency. The role of multiple sclerosis in the occurrence of neuritis. Treatment. Outcomes. Forecast. Ischemic neuropathy. Etiology, clinic, emergency care, treatment, outcome. Congestive optic disc. Causes and stages of development of stagnant disk, their inherent ophthalmic changes. State of visual functions in normal and complicated congestive disk. Differential diagnosis of optic nerve stasis and neuritis. Principles and methods of symptomatic treatment. Outcomes. Optic atrophy. Etiology, clinic, diagnosis, treatment, prognosis. Tobacco amblyopia: clinical features, treatment, prognosis. Pseudometric, pseudosuchia. Differential diagnosis.

Control questions for self-training of students:

1. Complaints of the patient with diseases of the retina can be:
2. The appearance of the symptom of "cherry stone" in acute obstruction of the Central artery of the retina is explained:
3. When thrombosis of the Central retinal vein on the fundus is observed:
4. Hippel-Landau disease is characterized by:
5. Hereditary diseases of the retina are:
6. There are _ _ _ forms of The Salus symptom.
7. Hypertensive retinopathy is _____stage of hypertensive changes of the fundus.
8. The presence of microaneurysms on the terminal venules and waxy exudates in the retina speak in favor:
9. The development of retinal traction in diabetic retinopathy is fraught:
10. When anemia in the retina observed:
11. Hemorrhages under the conjunctiva and in the retina is accompanied by _____ beriberi:
12. What eye diseases can lead to ear diseases?
13. Congenital anomaly of the optic nerve, which looks like a tumor-like formation at the site of the optic nerve disc is called:
14. What types of ischemic opticoat differ?
15. About what pathology of the optic nerve say "the patient sees nothing and the doctor sees nothing"?

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Lecture 7.

Topic: diseases of the lens.

Plan of the lecture:

1. The types and frequency of pathology of the lens.
2. Developmental abnormalities of the lens.
3. Congenital cataract.
4. Age-related (senile) cataract.
5. Aphakia, signs and principles of correction of aphakia.
6. Secondary cataract.
7. Consecutive cataracts.

Text material of the lecture: The types and frequency of pathology of the lens. Diagnostic methods, modern principles of treatment. Specific weight in the structure of low vision and blindness. Developmental abnormalities of the lens. Changes in disease Marfan, Marchesani and other syndromes. Methods and terms of treatment. Outcomes. Aphakia, lenticonus, lentiglobus, coloboma. Congenital cataract. Frequency and causes. Classification of cataracts in children. Simple, complicated, with accompanying changes. The most common congenital cataracts. Indications for early mydriasis and flashes and for surgical treatment in the first half of the year depending on the size of the cataract, its localization, visual acuity. Principles of operations. Prevention of the underdevelopment of the macula, in obscurations amblyopia preventing. Correction of aphakia. Features of "fractional" correction of aphakia. Contact lenses, intraocular lenses. Age-related (senile) cataract. Clinic. Stages of development of cataracts. Conservative treatment in the initial stages. Indications for surgery. Methods of cataract extraction. Cryoextraction. Phacoemulsification. Aphakia, signs and principles of correction of aphakia. Correction of unilateral aphasia. Intraocular correction and types of intraocular lenses. Contact lenses. Secondary cataract. Causes, clinic, treatment. Regenerative ability of the lens. Cells Adamuna-Eleshnica. Indications, terms and methods of operations. Outcomes. Consecutive cataracts. The occurrence of cataracts on the basis of common infections, common diseases, eye processes, as a result of mercury poisoning, nitrates, protein starvation, ionizing radiation, exposure to infrared rays, damage, etc. the Clinical picture of these types of cataracts. Treatment of cataracts depending on the etiology of the process and the degree of opacity of the lens.

Control questions for self-training of students:

1. Congenital defects of the lens are considered:
2. Can you explain why microsporidia is often accompanied by subluxation and dislocation of the lens?
3. When cataract occurs the following redistribution of proteins in the lens:
4. For conservative treatment of incipient cataract can be used:
5. With immature cataract, the following complications are possible:
6. Describe the clinic of overripe cataracts:
7. Secondary cataract is called, resulting in:
8. The main ocular manifestation of Marfan syndrome is:
9. The beginning age-related cataract in an objective study is characterized by:
10. Removal of the lens by ultrasound is called:
11. What are the main signs of aphakia:
12. Explain the impossibility of point correction of unilateral aphakia:
13. Which type of intraocular lens fixation is currently optimal:
14. What are some of the types of professional cataracts:
15. Name several types of complicated cataracts:

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Lecture 8.

Topic: Glaucoma.

Plan of the lecture:

1. Definition of glaucoma.
2. Types of glaucoma in adults and children.
3. Congenital glaucoma.
4. Primary glaucoma. Classification.
5. Principles of glaucoma treatment.
6. Acute attack of glaucoma.
7. Secondary glaucoma.

Text material of the lecture: Definition of glaucoma. Social significance of glaucoma as one of the main causes of blindness. Frequency and prevalence of the disease. Types of glaucoma in adults and children. The fundamental difference between glaucoma in children and adults. Congenital glaucoma. Frequency, etiology. The influence of various pathological conditions of pregnant women on the occurrence of embryonic underdevelopment of the angle of the anterior chamber of the eye. The role of heredity. Systemic diseases associated with congenital glaucoma. The earliest signs of the disease. The role of obstetrician, neonatologist, district pediatrician in the early detection of congenital glaucoma. Classification of congenital glaucoma. Differential diagnosis of congenital glaucoma with megalocornea, conjunctivitis, parenchymal keratitis, secondary glaucoma with retinoblastoma, Coates disease. Principles, terms and methods of emergency surgical treatment of congenital glaucoma. Outcomes. Forecast. Primary glaucoma. Modern views on etiology. Factors predisposing to the development of glaucoma. Hereditary factors in glaucoma. Classification. Clinical course of "open-angle and closed-angle glaucoma". Diagnostic methods: gonioscopy, topography, perimetry, ophthalmoscopy. Subjective and objective symptoms depending on the stage of the disease. Early diagnosis of glaucoma. Principles of conservative treatment of glaucoma. Antihypertensive drugs: cholinomimetics, anticholinesterase, adrenomimetics, betaadrenoblokatory, principles of appointment of these drugs depending on the type of glaucoma. Possibilities of laser microsurgery in the treatment of different types of glaucoma. Indications for surgical treatment, principles of pathogenetically oriented operations. The use of physical factors in the treatment of glaucoma. Acute attack of glaucoma. Causes, clinic. Differential diagnosis of acute attack of glaucoma with common diseases and with eye diseases. Complex emergency therapy of an acute attack of glaucoma. The possibility of the operation. Secondary glaucoma. The role of damage, inflammation, tumor processes of the eye in the occurrence of secondary glaucoma. Features of the course and treatment. Outcomes.

Control questions for self-training of students:

1. True intraocular pressure has a normal level equal to:
2. The secretion of intraocular fluid is carried out:
3. Primary glaucoma has the following forms:
4. Primary glaucoma has stages of development:
5. What drugs are used for antihypertensive therapy of glaucoma?
6. What symptoms are characteristic of an acute attack of angle-closure glaucoma?
7. Secondary acquired glaucomas are:
8. The ways of outflow of intraocular fluid from the eye are:
9. The drainage system of the eye is presented:
10. In primary angle closure glaucoma the angle of the anterior chamber is blocked:
11. To inspect the angle of the anterior chamber of the eye it is necessary to apply:
12. What state of the visual field characterizes the third stage of glaucoma?
13. Tonometric intraocular pressure has a normal level equal to:
14. According to what indicator, in General, the stabilization of the glaucoma process is estimated?
15. What are the main types of antihypertensive treatment of glaucoma:

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Lecture 9.

Topic: Neoplasms of the organ of vision.

Plan of the lecture:

1. Prevalence and most frequent localization of eye tumors at different ages.
2. Extraocular tumors.
3. Neoplasms of the eyeball.
4. Methods of diagnosis of tumors.
5. Principles and methods of treatment of tumors.

Text material of the lecture: Prevalence and most frequent localization of eye tumors at different ages. Characteristics of congenital and acquired, benign and malignant, intraocular and intraocular, actually ocular and systemic tumors. Methods of ophthalmological, laboratory, radiological, instrumental-hardware, ultrasonic, as well as fluorescent and other diagnostics. Eyelid tumors. Tumors of the orbit. Tumors of the lacrimal gland. Tumors of the conjunctiva and cornea. Intraocular tumors. Surgical, radiotherapy, chemotherapy and combination therapies. Cryotherapy, photo, laser coagulation. Outcomes. Prognosis for eye and life. The importance of early diagnosis.

Control questions for self-training of students:

1. Malignant tumors of the vascular membrane are:
2. In the development of retinoblastoma, there are ____ stages:
3. Describe the clinic of the cutaneous horn of the eyelid:
4. What are the malignant tumors of the eyelids:
5. What tumors are contraindicated cryodestruction of tumors?
6. Name benign tumors of the conjunctiva:
7. Benign or malignant tumor of the iris is pigment leiomyoma?
8. What are the complications characteristic of melanoma of the iris:
9. What are the benign tumors of the orbit:
10. What tumors of the lacrimal gland Can you name?

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Lecture 10.

Topic: Damage to the organ of vision.

Plan of the lecture:

1. Classification of damage to the organ of vision.
2. Methods of diagnosis of eye injuries.
3. Blunt damage to the eyeball.
4. Classification of wounds of the eyeball.
5. Penetrating wounds of the eye.
6. Metallosis eyes.
7. Complications of penetrating eye wounds.
8. Injuries of the orbit.
9. Burns of the organ of vision.

Text material of the lecture: The place of eye damage in General injury. Classification of eye injuries by etiology, localization, severity, presence and properties of a foreign body, etc. diagnostic Methods. First aid for eye injuries. Outcomes. Treatment of complications. Prevention of eye injuries. Blunt damage to the eyeball. Frequency and features of the clinic, course and outcomes in people of different ages. Classification according to severity. Concussions and bruises. Mechanism of damage. Clinic of blunt trauma from the cornea, anterior chamber, lens, vascular tract, vitreous, retina and optic nerve. Principle of treatment. Outcomes of blunt trauma depending on the severity of the lesion. Wounds of eyelids, conjunctiva, lacrimal organs. First aid with them. Wounds of the eye. Classification of eye injury: non-penetrating, penetrating, through and through. Penetrating eye injuries are simple, complex, with complications. Reliable and doubtful signs of penetrating wounds of the eyeball. First aid. The first surgical treatment. Features of the symptom complex of corneal and scleral wounds. Features of the course of penetrating wounds of the eyeball in the presence of a foreign body in it. Methods of determination and localization of foreign bodies. Metallosis and timing of its appearance. Clinic metallosis, causes of blindness in metallosis. Principles of removal of magnetic and amagnetic foreign bodies, magnetic samples. The significance of age-related features of the size of the eye according to echobiometry. Complications of penetrating wounds: traumatic non-purulent iridocyclitis, purulent iridocyclitis, endophthalmitis, panophthalmitis. Sympathetic ophthalmia. Clinic. Current. Frequency and timing of occurrence. Etiology. General and local treatment. Prognosis of the disease. Preventive control. Indications for removal of the wounded eye and the timing of the operation-enucleation. Injuries of the orbit. Frequency and possible causes. Diagnosis, symptoms of bone fractures and damage to the contents of the orbit: muscles, blood vessels, nerves, tenon capsule, lacrimal gland. Causes of exophthalmos and enophthalmos in orbital injuries. Clinic depending on the location and extent of damage. Syndrome of the upper orbital fissure. Clinical manifestations of optic nerve damage. Ophthalmological picture and change of visual functions at breaks and detachments of the optic nerve. Combined damage to the eye socket, skull bones, face, brain, etc. First aid. Principles of surgical treatment of injuries. Child injury. Causes of childhood injuries, features. Frequency of penetrating wounds, severe complications and outcomes. Prevention and control measures to reduce children's eye injuries. Combat injuries of the visual organ: the frequency of multiple shrapnel wounds, combination with burns, a high percentage of penetrating wounds and eye contusions, combined orbital injuries with injuries of the skull and brain, etc. Industrial injuries of the visual organ, microtraumatism, causes, clinic, prevention. Burns of the organ of vision: chemical, thermal, radiation. The most common causes and symptoms of eye burns in children and adults. Classification of burns according to their severity and prevalence. Features of the clinic, course and treatment of burns caused by acid, alkali, manganese crystals, aniline dyes. Emergency care for chemical burns, as opposed to emergency care for thermal burns. Treatment of burns: conservative and surgical. Radiation damage to the organ of vision. The impact on the organ of vision of rays of different lengths; ultraviolet radiation; blinding; infrared radiation.

Control questions for self-training of students:

1. The occurrence of subcutaneous emphysema of the eyelids after injury most often indicates:
2. Stab wounds to the soft tissues of the eye can cause:
3. In the surgical treatment of eyelid tears the most important is:
4. Traumatic detachment of the iris at the root is called:
5. Complications of penetrating eye wounds can be:

6. A burn that is accompanied by blistering, conjunctival ischemia, and corneal erosion is a _____ degree burn:
7. In case of damage to the eyes with toxic substances of irritating action as a first aid it is necessary:
8. The rupture of the eyelid in the medial adhesions is complicated due to:
9. The main symptoms of a fractured eye socket are:
10. Hemorrhage in the anterior chamber of the eye is called:
11. Than berlinovskoe is characterized by clouding of the retina?
12. What are the absolute signs of a penetrating injury to the eye:
13. What methods can determine the presence and localization of intraocular foreign body?
14. Describe first aid for penetrating eye injury:
15. What is electromotorically?

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