

MINISTRY OF HEALTH PROTECTION OF UKRAINE
ODESSA NATIONAL MEDICAL UNIVERSITY
Department of Otorhinolaryngology

Department of Otorhinolaryngology

I APPROVE
Vice-rector for scientific and pedagogical work

Eduard BURYACHKIVSKY
September 1st, 2024



WORKING PROGRAM IN THE DISCIPLINE

"EMERGENCIES IN OTORHINOLARINGOLOGY"

Level of higher education: second (master's degree)

Field of knowledge: 22 "Health care"

Specialty: 222 "Medicine"

Educational and professional program: Medicine

1. Description of the discipline:

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the discipline
Total number:	Field of knowledge 22 «Health care»	<i>Full-time (day) education</i> <i>Compulsory discipline</i>
Credits of ECTS: 3	Specialty 222 «Medicine» Level of higher education second (master's degree)	<i>Course: 6</i>
Hours: 90		<i>Semester: XI – XII</i>
Content modules: 4		<i>Lectures (0 hours)</i>
		<i>Seminars(0hours)</i>
		<i>Practical classes(30hours)</i>
		<i>Laboratories(0 hours)</i>
		<i>Independent work (60 hours)</i>
		<i>including individual tasks (0hours)</i>
	<i>Form of final control – Differentiated Test</i>	

2. The purpose and tasks of the educational discipline, competencies, program learning outcomes

The purpose is

- mastering diagnostic methods;
- treatment and the most common ENT diseases of children of early and younger childhood age;
- mastering systematic knowledge on the organization of ENT care;
- the formation of practical skills in the use of ENT instruments;
- mastering the skills of examining ENT patients of children of early and younger childhood age ;
- familiarity with the principles of local and general anesthesia;
- mastering the ability to diagnose traumatic injuries of ENT organs and provide them with first aid
- familiarity with the basics of ENT oncology;
- the formation of practical skills for examining the patient's ENT and the registration of its results in the inpatient medical record;
- formation of the ability to apply the knowledge, skills, abilities and understanding of otorhinolaryngology to solve typical tasks of the doctor's health care at the relevant position, the scope of which is provided for by certain lists of syndromes and symptoms of diseases, physiological conditions and diseases requiring special patient management tactics conditions, laboratory and instrumental studies, medical manipulations.

The tasks of the discipline are the following:

- mastering the main activities necessary for organizing work in the ENT department and ensuring prevention of the occurrence and spread of nosocomial infection;
- acquisition of practical skills for examining ENT organs;
- acquisition of practical skills in providing first aid in such conditions as bleeding from the ENT organs, closed soft tissue damage, fracture of the facial bones, laryngeal stenosis
- acquisition of practical skills for endoscopic examination of ENT organs;
- mastering knowledge of the basics of local and general anesthesia, acquire the ability to choose the method of anesthesia depending on the condition of the patient and the available ENT pathology;
- acquisition of practical skills for diagnosis and differential diagnosis for various ENT infectious processes, obtaining skills for choosing a treatment program and means of prevention for ENT infections;
- acquisition of skills and abilities for examination of the patient's ENT and the registration of the results in the relevant medical documentation;
- the formation of moral, ethical and deontological qualities in professional communication with the patient.

The process of studying the discipline is aimed at forming elements of following competencies:

- **Integral competence** (level 7) according to the requirements of the NRK. The ability to solve typical and complex problems, including those of a research and innovation nature in the field of medicine. Ability to continue learning with a high degree of autonomy.

• **General (GC):**

GC 1. Ability to abstract thinking, analysis and synthesis

GC 3. Ability to apply knowledge in practical situations

GC 4. Knowledge and understanding of the subject area and understanding of professional activity

GC 7. Ability to work in a team

GC 8. Ability to interpersonal interaction

GC 10. Ability to use information and communication technologies

GC 11. Ability to search, process and analyze information from various sources

GC 12. Determination and persistence in relation to assigned tasks and assumed responsibilities

GC 14. The ability to realize one's rights and responsibilities as a member of society, to be aware of the values of a public (free democratic) society and the need for its sustainable development, the rule of law, the rights and freedoms of a person and a citizen in Ukraine

GC 15. The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, techniques and technologies, to use various types and forms of motor activity for active recreation and leading a healthy lifestyle

GC 16. The ability to evaluate and ensure the quality of the work performed

GC 17. The desire to preserve the environment

• **Special (SK):**

SC1. Ability to collect medical information about the patient and analyze clinical data

SC2. Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results

SC7. Ability to diagnose emergency conditions

SC8. Ability to determine tactics and provide emergency medical care

SC9. Ability to carry out medical evacuation measures

SC10. Ability to perform medical manipulations

SC11. Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility

SC13. Ability to carry out sanitary and hygienic and preventive measures

SC16. Ability to maintain medical documentation, including electronic forms

SC17. The ability to assess the impact of the environment, socio-economic and biological determinants on the state of health of an individual, family, population

SC21. The ability to clearly and unambiguously convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying

SC24. Adherence to ethical principles when working with patients and laboratory animals

SC25. Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results

• **Program learning outcomes (PLO):**

PLO 1. Have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To bear responsibility for professional development, the ability for further professional training with a high level of autonomy.

PLO 3. Specialized conceptual knowledge, which includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems.

PLO 4. Identify and identify leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's history, data of the patient's examination, knowledge about the person, his organs and systems, establish a preliminary clinical diagnosis of the disease (according to list 2).

PLO 5. Collect complaints, anamnesis of life and diseases, evaluate the psychomotor and physical development of the patient, the state of organs and systems of the body, based on the results of laboratory and

PLO 7. Assign and analyze additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) (according to list 4) of patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).

PLO 8. Determine the main clinical syndrome or symptom, which determines the severity of the victim/victim's condition (according to list 3) by making a reasoned decision about the person's condition under any circumstances (in the conditions of a health care facility, outside its borders), including in the conditions of emergency and hostilities, in field conditions, in conditions of lack of information and limited time.

PLO 9. Determine the nature and principles of treatment (conservative, operative) of patients with diseases (according to list 2), taking into account the age of the patient, in the conditions of a health care institution, outside its borders and at the stages of medical evacuation, including in field conditions, on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes, in case of the need to expand the standard scheme, be able to justify personalized recommendations under the control of the head physician in the conditions of a medical institution.

PLO 12. To assess the general condition of a newborn child by making a reasoned decision according to existing algorithms and standard schemes, observing the relevant ethical and legal norms.

PLO 13. Assess and monitor the child's physical and psychomotor development, provide recommendations on feeding and nutritional features depending on age, organize preventive vaccinations according to the calendar.

PLO 14. Determine tactics and provide emergency medical care for emergency conditions (according to list 3) in limited time conditions according to existing clinical protocols and standards of treatment.

PLO 15. To organize the provision of medical aid and medical evacuation measures to the population and military personnel in emergency situations and hostilities, including in field conditions.

PLO 17. Perform medical manipulations (according to list 5) in the conditions of a medical institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.

PLO 18. To determine the state of functioning and limitations of a person's vital activities and the duration of incapacity with the preparation of relevant documents, in the conditions of a health care institution, based on data on the disease and its course, peculiarities of a person's professional activity, etc. Maintain medical documentation regarding the patient and the contingent of the population on the basis of regulatory documents.

PLO 21. Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information.

PLO 24. To organize the necessary level of individual safety (own and the persons he cares for) in case of typical dangerous situations in the individual field of activity.

As a result of studying the discipline, the student has to Know:

- modern concepts of national and foreign theoretical and practical pediatric otorhinolaryngology;
- The basic principles of the organization of ENT care to the population of Ukraine;
- The basics of organizing a rational regimen and treatment for the patient's ENT of children of early and younger childhood age;
- common elements of care for ENT patients;
- theoretical aspects of ENT instrumentation and methods of its use;
- theoretical aspects of preventing the occurrence and spread of nosocomial ENT infection;
- classification, clinical manifestations, consequences of bleeding from the ENT organs, methods of temporary and final stop of bleeding;
- basics of anesthesia in otorhinolaryngology;
- tactics for laryngeal stenosis, clinical manifestations of various stages, their diagnosis, measures for conservative and surgical treatment;
- general issues of injuries of ENT organs

- general issues of ENT oncology;
- clinic, diagnosis and treatment of purulent-inflammatory diseases of ENT organs;
- features of the structure of the inpatient medical record.

Be able:

- organize appropriate sanitary and epidemic conditions for various premises of the ENT department;
 - to collect anamnesis and objective examination of the patient's ENT;
 - choose an adequate anesthesia method for this or that intervention
 - diagnose various traumatic injuries of ENT organs;
 - provide first aid for various traumatic injuries of ENT organs;
 - choose the tactics of postoperative management of the patient's ENT, depending on the surgical intervention
 - to diagnose various inflammatory and non-inflammatory processes of ENT organs, to conduct differential diagnostics between them;
 - choose the appropriate surgical tactics for different stages of inflammation of ENT organs;
 - draw up a program of conservative treatment of various inflammatory processes of ENT organs;
 - issue an inpatient card for a patient with ENT pathology of children of early and younger childhood age
- Comply with the requirements of ethics, bioethics and deontology in their professional activities.

- **3. The content of the educational discipline**

Topic 1. Endoscopic methods of research of ENT organs. Clinical anatomy, physiology and research methods of hearing analyzer. Peculiarities of the anatomy of ENT organs, the pathology of which can lead to an emergency.

Acquiring practical skills by students: study of patency of the auditory tube, determination of hearing acuity. Clinical anatomy of the external ear. middle and inner ear (Structure of the convolution and its receptor apparatus). Transmission, transformation functions.

Topic 2. Injuries of the ear. Foreign bodies of the ear. Damage to the outer ear, middle ear, inner ear. Diagnostic methods. X-ray examination of the patient. Peculiarities of the ear trauma clinic. Modern methods of treatment. Types of foreign bodies in the ear, symptoms, features of removal. Curation of patients.

Topic 3. Sudden and acute sensorineural deafness. Sensorineural deafness - etiological classification, pathogenesis, comprehensive diagnosis, data of acumeny, audiometry, modern methods of conservative treatment. Prevention of diseases of the auditory nerve.

Topic 4. Clinical anatomy, physiology and research methods of the nose, paranasal sinuses. The structure of the external nose. The nasal cavity, the structure of its walls. Functional departments of the nasal cavity. Blood supply and innervation of the nasal system. Clinico-topographic relations of the lattice labyrinth, maxillary, frontal, sphenoid sinuses and surrounding anatomical formations. Peculiarities of the structure of the nasal system in childhood. Methods of researching the nasal cavity and paranasal sinuses.

Topic 5. Injuries of the nose. Foreign bodies.Diagnosis of injuries of the nose and paranasal sinuses (palpation, examination, x-ray of the nasal bones in the lateral projection). Classification of nose injuries. First aid for injuries.

Topic 6. Nosebleeds. Local and general causes of nosebleeds. Local and general means of stopping nosebleeds. The technique of anterior and posterior tamponade of the nose. Methods of stopping bleeding from Kieselbach's zone (cauterization of vessels of the mucous membrane, surgical stoppage of epistaxis). Bleeding from the lattice labyrinth, methods of stopping them.

Topic 7. Clinical anatomy, physiology and methods of research of the pharynx, esophagus. Anatomic formations of the nasopharynx, oropharynx, larynx. Structure and functions of the lymphadenoid pharyngeal ring. Topography of the larynx. Structure of esophagus, blood supply,

innervation. Departments of the esophagus and their topography. Anatomical and physiological narrowing of the esophagus.

Topic 8. Complications of acute tonsillitis. Tonsillitis. Classification. Paratonsillitis, paratonsillar abscess, lateropharyngeal abscess, intratonsillar abscess, adenophlegmon, spilled neck phlegmon, tonsillogenic sepsis. Abscestonsylectomy. Pharyngeal abscess.

Topic 9. Foreign bodies of the esophagus. Traumatic injuries of the esophagus. Methods of treatment. Possible complications. Different types of foreign bodies of the esophagus, symptoms. Stages of examination of a patient with a suspicion of a foreign body in the esophagus. Features of the clinic for foreign bodies in the esophagus, methods of their removal. X-ray examination of the patient. Symptoms and complications of foreign bodies of the esophagus.

Topic 10. Esophageal burns. Esophageal burns. Types of esophageal burns. The nature of necrosis in case of chemical burns with acids and alkalis. Pathological and clinical stages of esophageal burns. Clinic and first aid for esophageal burns. Prevention and treatment of cicatricial stenoses of the esophagus. Esophageal engorgement.

Topic 11. Clinical anatomy, physiology and research methods of the larynx. Clinical anatomy, physiology and research methods of the larynx. Blood supply and innervation of the larynx. Peculiarities of the anatomy of the larynx, the pathology of which can lead to an emergency.

Topic 12. Acute, chronic inflammatory diseases of the larynx. Acute laryngitis, classification (acute catarrhal laryngitis, laryngeal angina, phlegmonous laryngitis, epiglottis abscess, laryngeal chondroperichondritis). Acute subfold (subchordal) laryngitis: etiology, clinic, principles of treatment, types of nasotracheal intubations. Chronic laryngitis: catarrhal, hypertrophic, atrophic, clinical manifestations, possible complications. Principles of conservative and surgical treatment.

Topic 13. Non-inflammatory diseases of the larynx: allergic swelling of the larynx, Hayek-Reinke's disease. Injuries of the larynx. Paresis and paralysis of the larynx. Foreign bodies of the larynx. Features of the clinic for foreign bodies of the larynx, first aid.

Topic 14. Stenosis of the larynx. Etiology, classification, clinic of stenoses of the larynx. Pathophysiological mechanisms of compensation and decompensation in respiratory failure. Emergency care and etiopathogenetic treatment of laryngeal stenoses depending on the stage.

Topic 15. Tracheotomy, conicotomy. Indications for tracheotomy. Completing a set of tools for tracheotomy. The technique of tracheotomy, conicotomy may have complications. Principles of tracheostomy and tracheocannula care. Protection of medical history.

Credit. It is evaluated on a two-point scale: the grade "passed" is awarded to a higher education applicant who has completed the curriculum of the discipline, has no academic debt; the level of competence is high (creative); the grade "failed" is given to a student of higher education who has not completed the curriculum of the discipline, has academic debt (average score below 3.0 and/or missed classes); the level of competence is low (receptive-productive).

Recommended literature

Basic:

1. Y.Mitin, Y.Deyeva, Y.Gomza, V. Didkovskyi etc. Otorhinolaryngology// Medicine, 2018. – 264p.
2. Pukhlik S.M., Titarenko O.V. Otorhinolaryngology// Odessa, 2011. – 172 p.
3. A.Al-Qahtani, H.Haidar, A.Larem. Textbook of Clinical Otolaryngology// Hardback, 2020. - 1155 p.

4. P.W.Flint, B.H.Haughey, V.J.Lund, K.T.Robbins, J.R.Thomas, M.M.Lesperance, H.W.Francis. Cummings Otolaryngology: Head and Neck Surgery, 3-Volume Set// Format Hardback, 2020. - 3568

Additional:

5. S.N.Kumar.Clinical Cases In Otolaryngology// Paperback, 2016. – 260p.
 6. R.Pasha, J.S.Golub. Otolaryngology-Head and Neck Surgery : Clinical Reference Guid// Paperback, 2017. - 800 p.
 7. J. A.Seikel, D.G.Drumright, D.J.Hudock. Anatomy and Physiology for Speech, Language, and Hearing //Format Hardback, 2019. - 700 p.
 8. K.S.Helfer, E.L.Bartlett, A.N.Popper, R.R.Fay. Aging and Hearing: Causes and Consequences// Hardback. 2020. – 326p.
 9. Z.Mu, J.Fang. Practical Otorhinolaryngology, Head and Neck Surgery: Diagnosis and Treatment// Hardback, 2020. - 314 p.
 10. H.H.Ramadan, F.M.Baroody. Pediatric Rhinosinusitis// Paperback, 2020. - 300 p.

4. The structure of the educational discipline

Reference structure to the module

"EMERGENCIES IN OTORHINOLARINGOLOGY"

	Altogether	Lectures	Practical lessons	ISW
Theme 1. Endoscopic methods of research of ENT organs . Clinical anatomy, physiology and research methods of the ear.	6	0	2	4
Theme 2. Injuries of the ear. Foreign bodies of the ear. Treatment of patients.	6	0	2	4
Theme 3. Sudden and acute sensorineural deafness.	6	0	2	4
Theme 4.Clinical anatomy, physiology and research methods of the nose, paranasal sinuses.	6	0	2	4
Theme 5. Nose injuries.Foreign bodies of the nose.	6	0	2	4
Theme 6. Nosebleeds. Stopping methods nosebleeds.	6	0	2	4
Theme 7. Clinical anatomy, physiology and research methods of the pharynx, esophagus.	6		2	4
Theme 8. Acute and chronic tonsillopharyngitis and their complications. Paratonsillitis, paratonsillar abscess, lateropharyngeal abscess, intratonsillar abscess, adenophlegmon, spilled neck phlegmon, tonsillogenic sepsis. Abscestonsylectomy. Pharyngeal abscess.	6		2	4
Theme 9. Foreign bodies of esophagus.	6		2	4
Theme 10.Esophageal burns.	6		2	4
Theme 11. Clinical anatomy, physiology and research methods of the larynx .	6		2	4
Theme 12.Acute and chronic inflammatory diseases of the larynx.	6		2	4
Theme 13.Non-inflammatory diseases of the larynx.	6		2	4
Theme 14. Stenosis of the larynx. Differential diagnosis between true and false croup.	6		2	4
Theme 15. Tracheotomy, conicotomy.	6		0	2
Differentiated credit.	0	0	0	0
Credit	0	0	0	0
Altogether-90	90	0	30	60

5. Themes of lectures / seminars / practical classes/ laboratories

5.1. Themes of lectures. Lectures are not provided.

5.2. Themes of .Seminars are not provided.

5.3. Themes of practical classes

No	THEME	Hours
1	Theme 1. Endoscopic methods of research of ENT organs . Clinical anatomy, physiology and research methods of the ear.	2
2	Theme 2. Injuries of the ear. Foreign bodies of the ear. Treatment of patients.	2
3	Theme 3. Sudden and acute sensorineural deafness.	2
4	Theme 4. Clinical anatomy, physiology and research methods of the nose, paranasal sinuses.	2
5	Theme 5. Nose injuries. Foreign bodies of the nose.	2
6	Theme 6. Nosebleeds. Stopping methods nosebleeds	2
7	Theme 7. Clinical anatomy, physiology and research methods of the pharynx, esophagus.	2
8	Theme 8. Acute and chronic tonsillopharyngitis and their complications. Paratonsillitis, paratonsillar abscess, lateropharyngeal abscess, intratonsillar abscess, adenophlegmon, spilled neck phlegmon, tonsillogenic sepsis. Abscestonsylectomy. Pharyngeal abscess.	2
9	Theme 9. Foreign bodies of esophagus. Esophageal burns.	2
10	Theme 10. Esophageal burns.	2
11	Theme 11. Clinical anatomy, physiology and research methods of the larynx.	2
12	Theme 12. Acute and chronic inflammatory diseases of the larynx.	2
13	Theme 13. Non-inflammatory diseases of the larynx. Treatment of patients.	2
14	Theme 14. Stenosis of the larynx. Differential diagnosis between true and false croup.	2
15	Theme 15. Tracheotomy, conicotomy. Protection of medical history.	2
	Total	30

5.4. Themes of laboratories Laboratories are not provided.

6. Independent work of the student No.

No.	Theme	Hours
1.	Theme 1. Preparation for practical classes	4
2.	Theme 2. Preparation for practical classes	4
3.	Theme 3. Preparation for practical classes	4
4.	Theme 4. Preparation for practical classes	4
5.	Theme 5. Preparation for practical classes	4
6.	Theme 6. Preparation for practical classes	4
7.	Theme 7. Preparation for practical classes	4
8.	Theme 8. Preparation for practical classes	4
9.	Theme 9. Preparation for practical classes	4
10.	Theme 10. Preparation for practical classes	4
11.	Theme 11. Preparation for practical classes	4

12.	Theme 12. Preparation for practical classes	4
13.	Theme 13. Preparation for practical classes	4
14.	Theme 14. Preparation for practical classes	4
15.	Theme 15. Preparation for practical classes	4
	Total	60

8. Forms of control and assessment methods

(including criteria for evaluating learning outcomes).

Current control: oral survey, testing, assessment of class activity.

Final control: Credit. It is evaluated on a two-point scale: the grade "credited" is given to a higher education applicant who has completed the curriculum of the discipline, has no academic debt; the level of competence is high (creative); the grade "failed" is given to a student of higher education who has not completed the curriculum of the discipline, has academic debt (average grade below 3.0 and/or missed classes); the level of competence is low (receptive-productive).

Evaluation of the current educational activity in a practical session:

1. Evaluation of theoretical knowledge on the subject of the lesson:

- methods: survey, solving a situational clinical problem - maximum score – 5, minimum score – 3, unsatisfactory score

– 2. The grade for one practical lesson is the arithmetic average of all components and can only have a whole value (5, 4, 3, 2), which is rounded according to the statistical method.

Criteria of ongoing assessment at the practical class

Score	Assessment criterion
Excellent «5»	The student is fluent in the material, takes an active part in discussing and solving a situational clinical problem, confidently demonstrates practical skills during the examination of a patient and the interpretation of clinical, laboratory and instrumental research data, expresses his opinion on the topic of the class, demonstrates clinical thinking.
Good «4»	The student has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a patient and the interpretation of clinical, laboratory and instrumental research data with some errors, expresses his opinion on the topic of the class, demonstrates clinical thinking.
Satisfactory «3»	The student does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of the situational clinical problem, demonstrates practical skills during the examination of the patient and the interpretation of clinical, laboratory and instrumental research data with significant errors.
Unsatisfactory «2»	The student does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the patient and the interpretation of clinical, laboratory and instrumental research data.

The student is admitted to the differentiated assessment on the condition that the requirements of the educational program are met and if he received at least 3.00 points for the current educational activity.

9. Distribution of points, obtained by the student

The grade for the discipline consists of the grade for the current academic performance.

The average grade in the discipline is converted to the national grade and converted to points on a multi-point scale (200-point scale).

Conversion of traditional assessment into 200-point is carried out by the information and technical department of ONMedU by the special program by the formula:

$$\text{Average score (current academic performance)} \times 40.$$

Conversion table of traditional to multi-point

National score for the discipline	The sum of scores for the discipline
Excellent («5»)	185 – 200
Good («4»)	151 – 184
Satisfactory («3»)	120 – 150
Unsatisfactory («2»)	Less than 120

According to the ECTS rating scale, students' achievements in educational discipline, who study on the same course of one specialty, according to their scores, are assessed by means of rank, namely:

Conversion of the traditional evaluation and ECTS scores

Score on the ECTS scale	Statistical indicator
A	The best 10% students
B	Next 25% students
C	Next 30% students
D	Next 25% students
E	Next 10% students

10. Methodological support

- Working program in the discipline
- Syllabus - Methodological recommendations for the practical classes in the discipline
- Methodological recommendations for the individual work of students 12
- Multimedia presentations - Situational tasks (including calculation)
- Tests on the theme

Educational and methodical literature:

Y.Mitin, Y.Deyeva, Y.Gomza, V. Didkovskiy etc. Otorhinolaryngology// Medicine, 2018. – 264p.

11. Questions for the final control

1. Clinical anatomy of ear-drum. The children location and structure of ear-drum.
2. Clinical anatomy of tympani cavity. Features of its structure are in child's age.
3. Clinical anatomy, physiology of otosalpinx. Features of its structure are in child's age.
4. Clinical anatomy of internal ear. Structure of spiral organ. Adequate irritant of auditory analisator.
5. Mechanism of sound conduction (transmission, sound transformation). Theories of sound perception.
6. Methods of hearing analyzer research in young children.
7. Clinical anatomy of the semicircular canals and ampullary receptors of the inner ear. Vestibular nuclei and their connections.
8. Structure of the otolith apparatus. Adequate stimuli. Methods of research of the vestibular apparatus (caloric, rotational, otolith tests).
9. Clinical anatomy of the nasal cavity. Peculiarities of its structure in childhood.
10. Blood supply and innervation of the nasal cavity.
11. Clinical anatomy of the maxillary and ethmoidal sinuses. Clinical anatomy of the frontal and main sinus. Peculiarities of its structure in childhood. Clinical significance, physiology of the nasal cavity and paranasal sinuses.

12. Clinical anatomy of the pharynx, its departments.
13. Clinical anatomy of the larynx cavity, innervation of the larynx, its functions.
14. Clinical anatomy, physiology of the esophagus.
15. Hematoma and perichondritis of the auricle.
16. Foreign bodies of the ear, clinic, methods of removal.
17. Sensorineural deafness: causes, clinic, treatment.
18. Nose injuries. Classification of nose injuries.
19. Hematoma and abscess of the nasal septum: clinic, treatment.
20. Local and general causes of nosebleeds.
21. Local and general means of stopping nosebleeds.
22. Technique of anterior and posterior tamponade of the nose.
23. Classification of tonsillitis.
24. Paratonsillitis and paratonsillar abscess: etiology, classification, treatment.
25. Pharyngeal abscess in children: clinic, treatment.
26. Adenoid vegetations: clinic, treatment.
27. Chronic tonsillitis: etiology, pathogenesis, classification, clinic.
28. Types of decompensation of chronic tonsillitis, formation of a diagnosis.
29. Conservative and surgical treatment of chronic tonsillitis.
30. Acute and chronic laryngitis: etiology, clinic, treatment.
31. Juvenile angiofibroma of the nasopharynx: clinic, diagnosis, methods of removal.
32. Foreign bodies of the nose. Removal tools. Rhinoliths
33. Injuries of the nose and paranasal sinuses: classification, clinic, treatment.
34. Nosebleeds: causes, symptoms, methods of stopping.
35. Foreign bodies of the respiratory tract: causes of aspiration, history, characteristics of foreign bodies.
36. Stages of laryngeal stenosis, principles of treatment (medication, prolonged intubation, tracheotomy).
37. Non-inflammatory diseases of the larynx.
38. Injuries of the larynx.
39. Chronic laryngitis. Principles of conservative and surgical treatment.
40. Paresis and paralysis of the larynx.
41. Tracheostomy: indications, its options, performance technique.
42. Conicotomy, cricotomy: indications, performance technique.
43. Esophageal foreign bodies: clinic, diagnosis, methods of removal.
44. Traumatic injuries of the esophagus.
45. Complications of post-traumatic injuries of the esophagus
46. Esophageal burns: causes, pathology, clinical stages.
47. First aid for esophageal burns.

12. Recommended literature

Basic:

1. Y.Mitin, Y.Deyeva, Y.Gomza, V. Didkovskiy etc. Otorhinolaryngology// Medicine, 2018. – 264p.
2. A.Al-Qahtani, H.Haidar, A.Larem. Textbook of Clinical Otolaryngology// Hardback, 2020. - 1155 p.
3. P.W.Flint, B.H.Haughey, V.J.Lund, K.T.Robbins, J.R.Thomas, M.M.Lesperance, H.W.Francis. Cummings Otolaryngology: Head and Neck Surgery, 3-Volume Set// Format Hardback, 2020. - 3568

Additional:

4. J. A.Seikel, D.G.Drumright, D.J.Hudock. Anatomy and Physiology for Speech, Language, and Hearing //Format Hardback, 2019. - 700 p.
5. K.S.Helfer, E.L.Bartlett, A.N.Popper, R.R.Fay. Aging and Hearing: Causes and Consequences// Hardback. 2020. – 326p. 14

9. Z.Mu, J.Fang. Practical Otorhinolaryngology, Head and Neck Surgery: Diagnosis and Treatment// Hardback, 2020. - 314 p.

10. H.H.Ramadan, F.M.Baroody. Pediatric Rhinosinusitis// Paperback, 2020. - 300 p.

13. Electronic information resources

1. World Health Organization. URL: www.who.int/ru/index.html.

2. European Regional Office of the World Health Organization. URL: www.euro.who.int.

3. www.ama-assn.org – American Medical Association

4. www.dec.gov.ua/mtd/home/ - State Expert Center of the Ministry of Health of Ukraine

5. <http://bma.org.uk>– British Medical Association

6. www.gmc-uk.org- General Medical Council (GMC)

7. www.bundesaerztekammer.de – German Medical Association