FACULTY OF STOMATOLOGY

STUDY PROGRAM 0911.1 STOMATOLOGY

DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY AND ORAL IMPLANTOLOGY „ARSENIE GUȚAN"

APPROVED
at the meeting of the Committee for Quality Assurance and Curriculum Evaluation, Faculty of Stomatology
Minutes no. 3 from 16.02.2018

Chairwoman of the Committee, PhD MD, associate professor
Stepco Elena

APPROVED
at the meeting of the Faculty Council, Faculty of Stomatology
Minutes no. 6 from 20.02.2018

Dean of the Faculty, PhD MD, associate professor
Ciobanu Sergiu

APPROVED
at the Meeting of the Department of Oral and Maxillofacial Surgery and Oral Implantology *Asenie Guțan*
Minutes no. 3 of 22.11.2017

Head of the Department PhD MD, associate professor
Chele Nicolae

CURRICULUM

DISCIPLINE: **ANESTHESIA IN STOMATOLOGY**

Integrated studies

Course type: **Mandatory discipline**

Chișinău, 2017

I.PRELIMINARIES

- ***General presentation of the discipline: the place and role of the discipline in the formation of the specific competences of the specialty training program***

Dental extraction was one of the first surgical interventions in humans, and therefore the discovery of anesthesia was introduced right from the beginning in this area.

Anesthesia in dentistry is indispensable to any work that involves painful sensations. Modern anesthesia presents a diverse arsenal of techniques and methods, with predominant use of local regional anesthesia, However, general anesthesia also plays an important role in surgical interventions. Modern requirements for patient comfort during dental care require the application of various combined anesthesia techniques, which require the potentiation of local anesthesia. These facts presuppose a very good knowledge of the students of this integrated department of modern dentistry, which deals with the study of anesthetic activity on the body, methods and techniques of application of anesthetic preparations, as well as with the prevention and treatment of complications resulting from the applied methods.

Mission of the curriculum (scope) in professional training

The main objectives of the anesthesia course in dentistry are to study the basic principles for the application of general and / or loco-regional anesthesia in OMF surgery. Another indispensable objective is knowledge of the indications and contraindications of different types of anesthesia and choice of the case-by-case method. The next objective is to apply the usual methods of loco-regional anesthesia in dentistry and the knowledge of the pharmacodynamics of contemporary anesthetics used in dentistry. A very important goal is to know immediate and late local and general complications, methods of prophylaxis and first aid in case of complications (hemorrhage, allergic reactions, etc.). It is important to develop clinical judgment for sinister work in different clinical situations.

- ***Discipline teaching languages***: romanian, russian, english.
- ***Beneficiaries***: students of the II year, faculty of Dentistry.

II. ADMINISTRATION OF THE DISCIPLINE

Code of discipline		**S.04.O.041**	
Name of the discipline		**Anesthesia in dentistry**	
Responsible for discipline		**Mihail Radzichevici,** dr. șt. med., conf. univ. **Chele Nicolae**, dr. șt. med., conf. univ., șef Catedră	
Year	**II**	Semester	**IV**
Total number of hours, inclusivly:			**120**

Course	**17**	Practical work	**17**
Seminars	**34**	Individual work	**52**
Evaluation form	**Examination**	Number of credits	**4**

III. TRAINING OBJECTIVES OF THE DISCIPLINE

- ***At the level of knowledge and understanding:***

✓ knowledge of the topographic anatomy of the oro-maxilo-facial region;
✓ assimilation of the features of general anesthesia in dentistry;
✓ assimilation of various methods of anesthesia in dentistry;
✓ assimilation of various methods of application of loco-regional anesthesia;
✓ to know the signs of post-anesthetic general and local complications and first aid.

- ***At the level of application:***

✓ to know the innervation area of different branches of the trigeminal nerve and to perform anesthesia according to indications.
✓ to know the indications of general anesthetic methods used in dentistry;
✓ knowledge and correct implementation of local and loco-regional anesthesia techniques;
✓ knowledge of indications and contraindications of anesthetic substances, depending on the patient's condition;
✓ the particularities of loco-regional anesthesia in dentistry according to the clinical case;
✓ indications of the use of general anesthetic methods in dentistry;
✓ pre-anesthetic training;
✓ indications of loco-regional anesthetic methods in dentistry;
✓ Injection techniques of loco-regional anesthesia;
✓ application methods of anesthetic substances tolerance appreciation (endonasal, conjunctival, cutaneous contact);
✓ infiltration anesthesia;
✓ plexus anesthesia;
✓ intrapapillary and intraligamentary anesthesia;
✓ infraorbital nerve block – intraoral pathway;
✓ infraorbital nerve block - cutaneous pathway;
✓ superior alveolar nerve block (tuberal anesthesia) - intraoral pathways;
✓ nasopalatine nerve block – intraoral pathway;
✓ nasopalatine nerve block – nasal pathway;
✓ palatal nerve block;
✓ inferior alveolar nerve block (mandibular anesthesia) –intraoral pathway;
✓ inferior alveolar nerve block (at spina spix) – intraoral dactile pathway;
✓ lingual nerve block;
✓ buccla nerve block – intraoral and cutaneous pathway;
✓ mental nerve block – intraoral pathway;

- ✓ mental nerve block – cutaneuos pathway;
- ✓ modern premedication methods;
- ✓ non-invasive local anesthesia techniques;
- ✓ knowledge of early signs of general and local immediate complications (blackout, syncope, shock, hemorrhage, paresthesia, asphyxia, etc.);
- ✓ emergency response in the event of immediate general and local complications (blackout, syncope, shock, hemorrhage, paresthesia, asphyxia, etc.);
- ✓ particularities of the anesthesia and dental interventions depending on the patients health condition.

IV. PRELIMINARY REQUIREMENTS

Knowledge of general anesthesia (GA) clinic in oral and OMF surgery. Advantages, disadvantages, particularities of GA in the OMF region. Knowing the methods of GA, ways and techniques of administration. Knowledge of anesthetics and surgical interventions in the OMF region according to the patient's condition (physiological and pathological). Knowing the peculiarities in preparing patients for anesthesia. Preanesthesia (premedication). Knowledge of methods and techniques of loco-regional anesthesia in OMF surgery, benefits, indications, contraindications. Knowledge of anesthetic solutions used in dentistry. Knowledge of incidents, accidents and local and general complications of loco-regional anesthesia and first aid. Knowledge of the information sources necessary in the oro-maxilo-facial surgery.

V. TOPICS AND APPROXIMATE HOUR DISTRIBUTION

r. /o	SUBJECT	Number of hours			
		ectu - res	emi- nars	racti- ce	ndivid ual
	General Anesthesia in Oral and OMF surgery. General data. Indications, contraindications. Clinic picture of GA. Advantages, disadvantages. Particularities of GA in the OMF region. History of anesthesia in dentistry and oro-maxillo-facial surgery. Definitions and purposes of anesthesia. Classification of methods of anesthesia used in dentistry and OMF surgery. Indications of anesthesia. Choosing the anesthetic method according to indications. Clinical picture of GA. Stages, advantages and disadvantages of GA.				
	1. General anesthesia in OMF surgery. General anesthesia methods. Routes and administration techniques. 2. General inhaled anesthesia. Anesthetic circuits. Volatile and gaseous liquid anesthetic preparations. Intravenous general anesthesia. Access, substances used. General and long-lasting anesthesia (indications, contraindications, advantages, disadvantages, routes of administration).				
	Particularities of anesthesia and surgical interventions in the OMF region according to the patient's predisposing factors (physiological and pathological). Elderly predisposing factors. Predisposing factors during pregnancy, cardiovascular pathological conditions: AHT, cardiac rheumatism,				

r. /o	SUBJECT	Number of hours			
		lectu - res	emi- nars	racti- ce	ndivid ual
	coronary heart disease. Myocardial infarction, chronic heart failure, valvular lesions, cardiac conduction disorders (tachycardia).				
	Particularities of anesthesia and surgical interventions in the OMF region depending on the patient's predisposing factors (pathological conditions). Pathological conditions: pulmonary (bronchitis, emphysema, bronchial asthma; hepatic; diabetic; allergic; neuro-psychic; hemorrhaging; neoplasic. Anesthetic risk in dentistry.				
	Preparing patients for anesthesia. Preanesthesia (premedication). Final testing 1. Psychological and physical preparation. Drug preparation. Medicines used in premedication (barbiturates, analgesics, vagolites, tranquilizers). Potential local anesthesia.				
	1. **Loco-regional anesthesia in OMF surgery. Definition. Classification. Advantages, indications, contraindications.** 2. Definition. Classification of loco-regional anesthesia methods. Advantages of loco-regional anesthesia. Indications of loco-regional anesthesia. Contraindications of loco-regional anesthesia. Anesthetic solutions used in dentistry, general data.				
	1. **Anesthetic solutions used in dentistry. Instrumentation and materials.** General data (qualities of anesthetic solutions, composition, requirements for anesthetic solutions). Local anesthetics. Anesthetic groups. The main representatives and their basic characteristics. Vasoconstrictive substances (natural and synthetic sympathomimetics), their role in the anesthetic solution. Adjuvant and diluent substances in the anesthetic composition and their role. Instruments and materials used in local and regional anesthetics.				
	Pre-anesthetic preparations. Preparing the patient and doctor for anesthesia. Preparing instruments for anesthesia. Preparing the operational field for anesthesia.				
	Anatomy of the trigeminal nerve. The maxillary nerve, origin, tract, afferent branches, the territory of innervation. The pterygoid nerve and sphenopalatine branch with its afferents: superior nasal, nasopalatine, anterior palatine, small palatines and accessories. Alveolar superior posterior, middle, superior and anterior alveolar nerves. Origin, trajectory, territory of innervation. The mandibular nerve. Tract, territory of innervation, eferential branches. The oral, lingual and auricular-temporal nerves. Lower alveolar nerve. Tract, territory of innervation, branches (mylohyoid nerve and anterior digastric nerve, incisive and mental nerves).				
	Local anesthesia (terminal). Methods and techniques. Final testing 2. Definition of local terminal anesthesia. Goals, clinic, indications. Terminal anesthesia by refrigeration. Indications, technique, substances used.				

r. /o	SUBJECT	Number of hours			
		ectu - res	emi- nars	racti- ce	ndivid ual
	Terminal anesthesia by injection. Indications, technique, substances used. Terminal anesthesia by contact (topical, applicative). Indications, technique.				
	Regional anesthesia (nerve block). Infraorbital nerve block. Regional anesthesia (nerve block). Goals, indications, peculiarities. Nerve block anesthesia of the infraorbital nerve - anesthetized territory, indications. Peripheral nerve block anesthesia of infraorbital nerve, endooral technique. Highlights. Peripheral nerve block anesthesia of infraorbital nerve, exooral technique. Highlights. Incidents, accidents and local complications.				
	Regional anesthesia (nerve block). Anesthesia of superior posterior alveolar nerves. Troncular anesthesia of superior and posterior alveolar nerves - anesthetized territory, indications. Peripheral nerve block anesthesia of the superior posterior alveolar nerves, endooral technique. Highlights. Peripheral nerve block anesthesia of superior posterior alveolar nerves, exooral technique. Highlights. Incidents, accidents and local complications.				
	Regional anesthesia (nerve block). Anesthesia of nasopalatine and anterior palatine nerves. Troncular anesthesia of nasopalatine nerve (to the anterior palatine foramen or incisive foramen) – anesthetized territory, indications. Peripheral nerve block anesthesia of nasal nasopalatine nerve, nasal and oral pathways, technique. Highlights. Incidents, accidents and local complications. Peripheral nerve block anesthesia of the upper palatine or anterior palatine nerve (at the posterior palatine foramen). Anesthetized territory, indications. Technique. Highlights. Incidents, accidents and local complications.				
	Regional anesthesia (nerve block). Anestesia of the lower alveolar nerve. Troncular anesthesia of the lower alveolar nerve – anesthetized territory, indications. Peripheral nerve block anesthesia of the lower alveolar nerve, endooral technique. Highlights. Peripheral nerve block anesthesia of the lower alveolar nerve, exooral technique. Highlights. Incidents, accidents and local complications.				
	Regional anesthesia (nerve block). Anestezia of the lingual and buccal nerves. Anesthesia at the mental foramen. Troncular anesthesia of the lingual nerve – anesthetized territory, indications. Peripheral nerve block anesthesia of the lingual nerve, technique. Highlights. Incidents, accidents and local complications. Peripheral nerve block anesthesia of the buccal nerve. Anesthetized territory, indications. Technique. Highlights. Incidents, accidents and local complications. Anesthesia at the mental foramen, indications. Technique. Highlights. Incidents, accidents and local complications.				
	Incidents, accidents and general complications of loco-regional anesthesia. General toxic accidents caused by the anesthetic substance. Blackout. Clinic. First aid. Cardio-respiratory syncope. Clinic. First aid. Cardio-respiratory stop. Clinic. Elementary measures to support vital functions. (Basic Life Support: A. Airway, B. Breathing, C. Circulations). Convulsions. First aid. Allergic accidents. (urticaria, Quincke's edema,				

r. /o	SUBJECT	Number of hours			
		lectu - res	emi- nars	racti- ce	ndivid ual
	anaphylactic shock) Complications determined by the predisposing factors (elderly, pregnant, cardiovascular, diabetes, coagulopathy).				
	Incidents, accidents and local complications of loco-regional anesthesia. Immediate accidents: pain, vascular lesions, transient paresis. Immediate accidents: eye disorders, fall of the needle in the upper respiratory tract, needle rupture, lack of anesthesia. Complications (secondary accidents): mucosal necrosis, post-anesthetic edema, dry alveolitis, perimaxillary infections, post-anesthetic neuritis.				
	Total	**7**	**4**	**7**	**2**

VI. INSTRUCTIONAL OBJECTIVES AND CONTENT UNITS

Objectives	Content units
Section 1.„ General anesthesia in OMF surgery and Dentistry”	
✓ Define the notion and goals of anesthesia. Classification of methods of anesthesia used in dentistry and OMF surgery. ✓ To know the choice of the anesthetic method according to instructions, general anesthesia clinic and stages of general anesthesia. ✓ Know the advantages and disadvantages of general anesthesia. ✓ To know the specificities of the GA related to the OMF territory. ✓ Know general inhaled anesthesia. Anesthetic circuits. Preparations of volatile and gaseous liquid anesthetics. ✓ Know general intravenous anesthesia. Access and substances used. ✓ Know the methods of conscious sedation (relative premedication analgesia, intravenous sedation, neuroleptanalgesia).	The notion and goals of anesthesia. Anesthesia methods according to indications. Clinic and stages of general anesthesia. Advantages and disadvantages of general anesthesia, specificities related to OMF territory. Ways of administering general anesthesia (inhaled anesthesia, intravenous general anesthesia). Methods of conscious sedation. General and long-lasting general anesthesia methods.

✓ Know the short-lasting and long-lasting methods of general anesthesia (indications, contraindications, advantages, disadvantages, pathways of administration). ✓ Apply the knowledge in the formulation of the treatment plan ✓ Formulate conclusions	
Section 2.„ Loco-regional anesthesia in OMF surgery and Dentistry”	
✓ To know the definition, classification, advantages, indications, contraindications of loco-regional anesthesia in dentistry. ✓ To know the qualities of anesthetic solutions, composition, requirements for anesthetic solutions. Local anesthetics. Anesthetic groups. The main representatives and their basic characteristics. Vasoconstrictive substances, their role in the anesthetic solution. ✓ Knowing the requirements for patient’s preparation for anesthesia. ✓ To distinguish the particularities of anesthesia and surgical interventions in dentistry depending on the patient's predisposing factors (physiological and pathological conditions). Anesthetic risk in dentistry. ✓ Acquire methods and techniques of local (terminal) anesthesia. ✓ To acquire the methods and techniques, anesthetic territory and indications for peripheral nerve block anesthesia in dentistry. Endooral and exooral techniques for the application of peripheral nerve block anesthesia. ✓ To apply the knowledge in the preparation of the treatment plan ✓ Formulate conclusions	Loco-regional anesthesia, generalities (definition, classification, advantages, indications, contraindications). Local anesthetic substances, the qualities of anesthetic solutions, composition, requirements for anesthetic solutions. Preparing patients for anesthesia. Particularities of anesthesia and surgical interventions in dentistry depending on the patient's predisposing factors. Methods and techniques of local (terminal) anesthesia. Peripheral nerve block anesthesia (nerve block), methods, techniques, indications, anesthetized territory.
Section 3. „General and local complications of anesthesia in dentistry”	

✓ To know the accidents and general complications of anesthesia: ✓ General toxic accidents caused by the anesthetic substance. ✓ Blackout. Clinic. First aid. ✓ Cardio-respiratory syncope. Clinic. First aid. ✓ Cardio-respiratory stop. Clinic. Elementary measures to support vital functions. (Basic Life Support: A. Airway, B. Breathing, C. Circulations). ✓ Convultions. First aid. ✓ Allergic accidents. (urticaria, Quincke's edema, anaphylactic shock. ✓ Know the complications of the "predisposal factors" (elderly, pregnant, cardiovascular, diabetes, coagulopathy). ✓ Know local accidents and complications of anesthesia. ✓ Immediate accidents: pain, vascular lesions, transient paresis. ✓ Immediate accidents: eye disorders, fall of the needle in the upper respiratory tract, needle rupture, lack of anesthesia. ✓ Complications (secondary accidents): mucosal necrosis, post-anesthetic edema, dry alveolitis, perimaxillary infections, post-anesthetic neuritis.	Accidents and general complications of anesthesia. Complications determined by the “predisposal factors”. Accidents and local complications of anesthesia.

VII. PROFESSIONAL (SPECIFIC (SS) AND TRANSVERSAL (TS) SKILLS AND LEARNING OUTCOMES

Professional skills:

PS1: Knowledge, understanding and use of specific medical language.

PS2: Knowledge and understanding of the features of general anesthesia in dentistry, GA guidelines and combined methods of anesthesia.

PS3: Knowledge of the principles of action of substances used in both general and local anesthesia.

PS4: Knowledge of the innervation territory of the trigeminal nerve in order to choose the appropriate anesthetic method in the clinical case.

PS5: Perform local and regional anesthesia (peripheral nerve block).

PS6: Knowledge of local and general complications of anesthesia and principles of first aid.

Transversal skills:

TC1: Applying professional standards of assessment, acting according to professional ethics.

Promoting logical reasoning, practical applicability, assessment and self-assessment in decision-making.

TC2: Performing activities and exercising the roles specific to teamwork within the OMF clinic/ section. Promoting the spirit of initiative, dialogue, cooperation, positive attitude and respect for others, empathy, altruism and continuous improvement of their own activity.

TC3: Systematically assessing personal skills, roles and expectations, applying self-assessments to learning processes, acquired skills and professionalism needs, effective use of language skills, knowledge in information technologies, research and communication skills. To deliver quality services and adaptation to the dynamics of policy requirements in health for personal and professional development.

✓ Learning outcomes

At the end of the discipline studies, the student will capable to:

- ✓ Know the specifics and indications for general anesthesia in dentistry;
- ✓ Understand the particularities of anesthesia according to the patient's predisposal factors;
- ✓ to know and to apply methods and techniques of loco-regional anesthesia in dentistry;
- ✓ know the composition and action of contemporary anesthetics used in dentistry;
- ✓ know indications and contraindications for loco-regional anesthesia;
- ✓ know the possible complications that may occur as a result of anesthesia;
- ✓ be able to provide emergency medical help in the event of complications following anesthesia;
- ✓ to abide the clinical medical deontology of the medical student;
- ✓ be competent to use the knowledge gained in medical practice;
- ✓ be competent to use critical thinking and reliable scientific information obtained, using the new information and communication technologies.

VIII. THE STUDENT'S INDIVIDUAL WORK

Nr.	Expected product	Implementation Strategies	Evaluation criteria	Time limits
1.	Work with information sources:	Read the lecture or the material in the manual to the theme carefully. Read questions on the subject, which require a reflection on the subject. To get acquainted with the list of additional information sources on the topic. Select the source of additional information for that theme. Reading the text entirely, carefully and writing the essential content. Formulation of generalizations and conclusions regarding the importance of the theme / subject.	Ability to extract the essentials; interpretative skills; the volume of work	During the semester
2.	Work with the practical lessons:	Until solving the tasks in the notebook to analyze the information and images from the respective subject in the lecture and handbook. Solving consecutive tasks. Formulate conclusions at the end of each lesson. Verify the final points of the lesson and appreciate their achievement. Selection of additional information, using electronic addresses and additional bibliography.	the volume of work, problem solving, ability to formulate conclusions	During the semester
3.	Work with online materials	Study of online materials.	Evaluate the quality of the selected material, and the ability to understand information.	During the semester

IX. METHODOLOGICAL SUGGESTIONS FOR TEACHING, LEARNING AND EVALUATION

✓ **Teaching and learning methods**

During ***teaching*** process the anesthesia in dentistry different methods and procedures were used, oriented towards the efficient acquisition and achievement of the objectives of the didactic process. The course provides lectures, seminars, practical works and individual work. Courses are held in the IV semester by person entitled to conduct it. The following forms of training used in practical work: frontal and individual activity, brainstorming sessions, group discussions, and case studies. As a teaching aid, the specialized manuals are available in the university library, the methodological recommendations of the department's staff, tables, schemes, information sources in electronic format, national and international professional websites also are available. Students receive individual assignments that are presented for group discussions, which subsequently assess the quality of individual work and practical skills. In order to acquire the didactic material and teambuilding skills during the semester the students perform a mini-research in the field, the results of which are presented in the seminars and practical lessons, organized in the last month of the semester.

The folowing ***learning*** methods are recomended: acquiring theoretical knowledge after lecture and course materials; *observation* - identifying the characteristic features of doctor-patient communication; *analysis* - when using the clinical and paraclinical examination methods of patients, as well as the methods and stages of anesthesia; *comparison* - analysis by comparison of the local and general anesthesia methods according to their advantages and disadvantages; *elaboration of the algorithm* - selection of the mandatory elements and elaboration of the patient consultation algorithm; *modeling* - identifying and selecting the necessary elements for modeling the situations when consulting patients, formulating the conclusions, reasoning and making the final decision.

✓ **Applied didactic strategies / technologies** *(discipline specifics)*

Frontal activity, individual, brainstorming sessions, group discussions, clinical case analysis, teambuilding, clinical exam simulation, mini-research, comparative analysis.

✓ **Evaluation methods** *(including an indication of how the final grade is calculated)*

Current: scheduled checks during seminars and practical works, 3 totals in writing and / or as test-control. The student is evaluated for individual work done during the semester, all grades are summarized in one final grade. At the end of the semester, based on the deductions from the totals, the average annual score is made.

Final: The course ends with an exam.

The **final grade** will consist of the average score from three totals, which takes place at the finishing of each compartment (part 0.5), the final test sample (share 0.2) and the oral answer sample (share 0.3).

The scores obtained at the evaluation stages will be expressed in numbers according to the scoring scale (according to the table) and the final grade obtained will be expressed in two decimal figures, which will be entered in the notebook.

The roundup of the grades at the evaluation steps

Intermediate note grid (annual average, grades from the exam stages)	National scoring system	Equivalent ECTS
1,00-3,00	**2**	**F**
3,01-4,99	**4**	**FX**
5,00	**5**	**E**
5,01-5,50	**5,5**	
5,51-6,00	**6**	
6,01-6,50	**6,5**	**D**
6,51-7,00	**7**	
7,01-7,50	**7,5**	**C**
7,51-8,00	**8**	
8,01-8,50	**8,5**	**B**
8,51-8,00	**9**	
9,01-9,50	**9,5**	**A**
9,51-10,0	**10**	

Note: *Failure to attend the examination without good reason is recorded as "absent" and is equivalent to 0 (zero). The student is entitled to 2 (two) claims of the unsuccessful exam.*

X. RECOMMENDED BIBLIOGRAPHY:

A. Mandatory:

1. Lesson materials.
2. Burlibaşa C. Chirurgie orală şi maxilo-facială. Bucureşti: Editura Medicală, 1997.
3. Voroneanu M., Vicol C., Gogălniceanu D., Barna M. Chirurgie orală şi maxilo-facială. Vol.1. Iaşi: Editura Cariatide, 1994.
4. Бернадский Ю. И. Основы челюстно-лицевой хирургии и хирургической стоматологии, 3-е изд. Перераб. и доп. Москва: Медицинская литература, 2007.
5. Кулакова А. А., Робустова Т. Г., Неробеева А. И. Хирургическая стоматология и челюстно-лицевой хирургия. Москва: Гэотар Медия, 2010.
6. Тимофеев А. А. Челюстно-лицевой хирургия. Киев: Медицина, 2015.
7. Hupp James R., Ellis III Edward, Tucker Myron R. Contemporary Oral and Maxillofacial Surgery. Fifth Edition. Mosby Elsevier, 2008.
8. Moore U. J. Principles of Oral and Maxillofacial Surgery. Sixth Edition, Wiley-Blackwell, 2011.
9. Peterson Larry. Principles of Oral and Maxillofacial Surgery. Second Edition, BC Decker Inc, 2004.

B. Additional:

1. Burlibaşa C. Chirurgie orală şi maxilofacială. Bucureşti: Editura medicală, 2003.

2. Rotaru A., Băciuţ G., Rotaru H. Chirurgie maxilo-faciala. Cluj-Napoca: Editura „Iuliu Haţieganu" 2003.

3. Rotaru A. Urgenţe, riscuri şi dificultăţi în practica stomatologică. Cluj-Napoca: Ed. Dacia, 1992.

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5. Барера Г.М., Зорян Е.В. Рациональная фармакотерапия в стоматологии. Руководство для практикующих врачей. Москва, 2006.

6. Машковский М. Д. Лекарственные средства. Москва: ООО Новая Волна, 2000. (Том 1, 2).