**FACULTY OF DENTISTRY**

**SYLLABUS**

**0911.1 DENTISTRY**

**DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY AND ORAL IMPLANTOLOGY *Arsenie guțan***

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| --- | --- |
| APPROVEDat the meeting of the Committee for Quality Assurance and Curriculum Evaluation, Faculty of DentistryMinutes no. \_\_\_ from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Chairwoman of the Committee, PhD MD, associate professorStepco Elena  | APPROVEDat the meeting of the Faculty Council, Faculty of Dentistry Minutes no.\_\_\_ from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Dean of the faculty, PhD MD, associate professorCiobanu Sergiu  |

APPROVED

at the Meeting of the Departmentof

Oral and Maxillofacial Surgery and Oral Implantology *Asenie Guțan*

Minutes no.\_\_\_ of\_\_\_\_\_\_\_\_\_\_\_\_

Head of the Department PhD MD, associate professor

Chele Nicolae \_\_\_\_\_\_\_\_\_\_

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**CURRICULUM**

SUBJECT: **ODONTECTOMY**

**Integrated studies**

Course type: **Compulsory**

Chișinău, 2018

1. **PRELIMINARY**
* ***General presentation of the subject: the role of subject in building skills specific to the instructional and professional training programme /Speciality***

 The Odontectomy course is an important component in the field of clinical education and its main aim is to make students acquire the principles and techniques of dental extraction as well as proper management of post-extraction accidents and complications. This subject includes both the attitude towards the patients with concomitant diseases requiring dental extraction and special conduct in medical emergencies caused by dental extraction.

***Curriculum purpose in the professional training***

The course content is structured in order to improve the dental students` practical skills of patient examination, to develop the clinical reasoning skills of the future dentists, to make students learn and acquire knowledge of efficient dental extraction procedures, to carry out the treatment and prophylaxis of the intra/post-extraction accidents and complications.

* ***Languages of study:*** Romanian and English.
* ***Target public:*** 3rd year students, Faculty of Dentistry.
1. **SUBJECT MANAGEMENT**

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| --- | --- |
| Subject code | **S.05.O.055** |
| Subject name | **Odontectomy** |
| Subject leaders | **Zănoagă Oleg,** PhD, MD, assoc.prof.**Chele Nicolae**, PhD, MD, assoc.prof, Head of Chair |
| Year | **III** | Semester | **V** |
| Total number of hours, including: | **90** |
| Lectures | **17** | Practical work | **17** |
| Seminars | **34** | Individual work | **22** |
| Type of assessment | **Credit test** | Number of credits | **3** |

1. **LEARNING OBJECTIVES**

***At the end of the course the students will be able to:***

* ***At knowledge and comprehension level:***
* to know the instruments used in oral and maxillofacial surgery;
* to know indications and contraindications for dental extractions;
* to understand the principles of preparing the surgeon and patientfor dental extraction;
* to know the technique and stages of dental extraction with forceps and elevators;
* to understand minimally invasive extraction techniques;
* to know the principles of extraction by alveolotomy;
* to understand the particularities of dental extractions in patients with concomitant diseases;
* to know the particularities of antibiotic prophylaxis in dento-alveolar and maxillofacial surgery;
* to know the dental extractions accidents and complications;
* to know medical emergencies caused by dental extraction.
* ***At application level:***
* to distinguish instrumentation used in oral and maxillofacial surgery;
* to evaluate indications and contraindications for dental extractions;
* to distinguish various techniques of performing mucoperiosteal flaps;
* to distinguish different types of incisions;
* to distinguish different types of sutures;
* to evaluate the practical role of the correct management ofdental post-extraction wounds;
* to interpret laboratory results in patients with concomitant diseases subjected todental extraction;
* to evaluate the dental extraction accidents and complications.
* ***At integration level:***
* to be able to differentiate basic and supplimentary dental instruments for dental extraction;
* to be able to carry out basic and auxiliary steps in dental extraction as well as to handle forceps and elevators;
* to be able to perform minimally invasive dental extractions;
* to be able to perform atypical dental extractions;
* to be able to provide medical first aid inacute respiratory failure;
* to be able to carry out basic life support measures;
* to be able to implement the knowledge gained in the research activity;
* to be able to use critically and confidently the scientific information obtained using the new information and communications technologies;
* to be able to use multimedia technology in order to receive, to evaluate, to store, to produce, to present and to exchange information, as well as to communicate and to participate in professional networks on the Internet;
* to be able to learn to learn, which will contribute to professional path management.
1. **PRELIMINARY REQUIREMENTS**

To know and comply with ethical-moral and professional norms in patient-doctor relationship. To know the purpose and tasks of oral and maxillofacial surgery. To know the anatomic and topographic features of the oral and maxillofacial region. To know methods and stages of clinical and paraclinical examination used in oral and maxillofacial surgery. To know instruments used in oral and maxillofacial surgery. To know indications and contraindications for dental extractions. To know the dental extraction accidents and complications. To know the methods of prophylaxis. To know the stages of surgeon's preparation for surgery. To know the information sources necessary in oral and maxillofacial surgery.

1. **TOPICS AND APPROXIMATE HOUR DISTRIBUTION**

| No. | ТOPIC | Number of hours |
| --- | --- | --- |
| Lectues | Semi-nars | Prac-tice | Individual |
|  | Instruments used in dento-alveolar and maxillofacial surgery.History of instruments used in oral and maxillofacial surgery.Classification of instruments used in oral and maxillofacial surgery. Basic instruments for dental extraction.Classification and structure of forceps and elevators. Extra equipment for dental extraction. | 1 | 2 | 1 | 3 |
|  | Dental extraction. Indications and contraindications. Pre-extraction preparations.Dental extraction as a surgical intervention, definition. History of dental extraction. Dental extraction indications and contraindications.Preparing the patient and surgeon for dental extraction. | 1 | 2 | 1 | 0 |
|  | Techniques and stages of dental extraction using forceps and elevators. Techniques of minimally invasive dental extraction.General principles of dental extraction technique. Instructions for using forceps and elevators. Basic steps of dental extraction using forceps and elevators. Auxiliary steps of dental extraction. Techniques of minimally invasive dental extraction with periotome, piezotome and Benex Root Control. | 1 | 2 | 1 | 1 |
|  | **Extraction of the maxillary teeth**.Instrumentation for maxillary teeth extraction. Anesthesia methods used in the upper jaw. Particularities of extraction of upper incisors. Particularities of extraction of upper canines. Particularities of extraction of upper premolars. Peculiarities of extraction of the first two upper molars. | 1 | 1 | 1 | 1 |
|  | **Extraction of the mandibular teeth. Summative** **assessment.**Instrumentation for mandibular teeth extraction. Anesthesia methods used in the lower jaw. Particularities of extraction of inferior incisors. Particularities of extraction of inferior canines. Particularities of inferior premolars extraction. Particularities of extraction of the first two lower molars. | 1 | 2 | 1 | 1 |
|  | **Extraction of the upper third molars.**Indications and contraindications for the upper thirdmolar extraction. Classification ofthe upper thirdmolars (sagittal and transverse position, relation with the second molar, maxillary sinus relation, the nature of the covering tissue). Types and techniques of mucoperiosteal flap design. Techniques of extraction of the third upper molars. Instruments. Types of sutures. Intraoperative accidents associated with extraction of the upper third molar. Prevention. | 1 | 2 | 1 | 2 |
|  | **Extraction of the lower third molars.**Indications and contraindications forthe lower third molar extraction. Classification of the lower third molars(by position - sagittal and transversal plane, in relation to the second molar, by position to the mandibular ascending branch, by the mandibular canal relation, by the nature of the covering tissue). Types and techniques for mucoperiosteal flap design. Techniques of the lower third molar extraction. Instruments used. Types of sutures. Intraoperative accidents caused by the lower third molar extraction. Prevention.  | 1 | 2 | 1 | 2 |
|  | **Extraction by alveolotomy.**Alveolotomy. Definition. Indications. Types of alveolotomy. Types of incisions. Partial alveolotomy and total alveolotomy. Indications. Technique. Instruments. | 1 | 2 | 1 | 2 |
|  | **Management of dental post-extraction wound.**Examinationof dental post-extraction wound, periapical curettage. Indications. Instruments. Smoothingof interdental septa and alveolar edges. Indications. Instruments. Post-extraction wound suturing. Indications. Contraindications. Methods. Post-extraction recommendations. Dental post-extraction wound healing. | 1 | 2 | 1 | 2 |
|  | **Particularities of dental extractions in patients with concomitant diseases.**Particularities of dental extractions in patients with respiratory, cardiovascular, endocrine, digestive and renal diseases; patients with epilepsy, and patients on antithrombotic therapy. Dental extractions in the in-patient setting. | 1 | 2 | 1 | 1 |
|  | **Antibiotic prophylaxis in dento-alveolar and maxillofacial surgery. Summative assessment.**Antibioticprophylaxis. Definition. Indications for antibiotic prophylaxis. Risk groups. Antibacterial prophylaxis. | 1 | 2 | 1 | 1 |
|  | **Accidents caused by dental extraction.**Classification of accidents caused by dental extraction. Dental injuries. Lesions of soft perimaxillary parts. Bone lesions. Sinus accidents. Displacement of teeth into perimaxillary spaces. Nerve damage. Temporomandibular joint luxation. Diagnosis, treatment, prophylaxis. Other types of accidents (swallowing of dental or bone fragments, instrument fracture).  | 1 | 2 | 1 | 2 |
|  | **Post-extraction dental haemorrhage.**Post-extraction dental haemorrhage. Definition. Classification. Etiological factors. Clinical picture. Local haemostatic methods. General treatment of patients with the haemorrhagic syndrome. Prophylaxis of post-extraction dental hemorrhage. | 1 | 2 | 1 | 1 |
|  | **Local haemostatic agents.**Local haemostatic agents. Definition. Classification. Active hemostatic agents (thrombin and fibrin glue). Mechanism of action. Passive haemostatic agents. Method of providing post-extraction dental hemostasis by local application of human thrombin and 5% aminocaproic acid. Properties of the ideal hemostatic agent. | 1 | 2 | 1 | 1 |
|  | **Post-extraction alveolitis.**Post-extraction alveolitis. Definition. Etiology. Anatomical and pathological forms. Symptoms. Evolution. Treatment. Prevention. | 1 | 2 | 1 | 0 |
|  | **Acute respiratory failure**.Acute respiratory failure. Definition. Etiological factors. Partial and total airways obstruction. Clinical picture. Conduct. Tracheotomy and cricothyrotomy. Indications. Benefits. Disadvantages. | 1 | 2 | 1 | 1 |
|  | **Cardiopulmonary resuscitation in adults. Summative** **assessment.**Heart attack. Definition. Causes. Manifestations. Clinical death. Recognition of signs suggestive of heart attack. Pathognomonic signs of clinical death. Clinical death. Differential diagnosis. Basic Life Support - elementary measures to support vital functions. Signs of biological death and death confirmation. | 1 | 2 | 1 | 1 |
| **Total**  | **17** | **34** | **17** | **22** |

1. **INSTRUCTIONAL OBJECTIVES AND CONTENT UNITS**

| **Objectives**  | **Content units**  |
| --- | --- |
|  Typical dental extraction and instrumentation used |
| * to know the instruments used in dento-alveolar and maxillofacial surgery;
* to define the term of dental extraction;
* to know indications and contraindications for dental extraction;
* to understand the principles of preparing the surgeon and patient for dental extraction;
* to know the technique and stages of dental extraction with forceps and elevators.
 | Classification of instruments. Structure of forceps and elevators.Indications and contraindications for dental extraction. Preparing the surgeon and patient for dental extraction.General principles of dental extraction technique. Instructions for using forceps and elevators. Basic and auxiliary steps in dental extraction using forceps and elevators. Techniques of minimally invasive dental extraction. |
| **Atypical dental extraction** |
| * to know the classification of upper and lower wisdom teeth;
* to know the indications and contraindications for atypical extraction of wisdom teeth;
* to know and to carry out dental extraction technique by alveolotomy;
* to know the techniques and types of mucoperiosteal flap design;
* to know the types of incisions and sutures;
* to know the peculiarities of the right management of dental post-extraction wounds;
* to know the intraoperative accidents caused by wisdom teeth extraction.
 | Indications and contraindications of the third upper and lower molar extraction. Classification of third molars. Techniques of mucoperiosteal flap design. Techniques for extraction of the third molar. Types of sutures. Intraoperative accidents caused by the extraction of third upper and lower molars.Alveolotomy. Indications. Types. Alveolotomy techniques.Examination of post-extraction wound. Post-extractionrecommendations. Post-extractionwound healing. |
| Accidents and complications caused by dental extraction |
| * to know the particularities of dental extraction in patients with concomitant diseases;
* to know the particularities of antibiotic prophylaxis in dento-alveolar and maxillofacial surgery;
* to know the classification of dental extraction accidents;
* to know the particularities of dental post- extraction hemorrhage;
* to know local haemostatic agents and their properties;
* to know treatment particularities of post-extration alveolitis;
* to know the medical emergencies caused by dental extraction.
 | Particularities of dental extractions in patients with concomitant diseases.Antibiotic prophylaxis. Indications. Regimens.Accidents caused by dental extraction.Causes, symptomatology and treatment of dental post-extraction hemorrhage.Local haemostatic agents.Symptomatology, treatment and prophylaxis of post-extraction alveolitis.Acute respiratory failure. Clinical picture. Conduct.Cardiac arrest. Causes. Clinical picture. Cardiopulmonary resuscitation in adults. |

1. **PROFESSIONAL (SPECIFIC (SS) AND TRANSVERSAL (TS) SKILLS AND LEARNING OUTCOMES**
* **Professional (specific) skills (SS)**

**SS1:** to know, to understand and to use of specific language in dento-alveolar and maxillofacial surgery; to know and to understand instrumentation used in dento-alveolar and maxillofacial surgery; to explain indications and contraindications for dental extractions; to know the principles of preparing surgeon and patient for dental extraction; to know the techniques and stages of dental extraction with forceps and elevators.

**SS2:** to know and understand minimally invasive extraction techniques; to know and simulate types of incisions and sutures; to know the peculiarities of correct attitude towards the dentalpost-extraction wound;

**SS3:** to know intraoperative injuries /accidents caused by wisdom teeth extraction; to know the principles of extraction by alveolotomy.

**SS4:** to know and understand the particularities of dental extractions in patients with concomitant diseases; to know dental extractionaccidents and complications; to know and understand medical emergencies caused by dental extraction.
**SS5:** to describe and know the peculiarities of antibiotic prophylaxis in dento-alveolar and maxillofacial surgery, as well as risk groups; to know the particularities of post-extraction dental hemorrhage; to recognize local haemostatic agents.
**SS6:** to demonstrate and apply acquired knowledge in the clinical and paraclinical assessment of patient; to select and argument the medical first aid techniques in emergencies caused by dental extraction.

* **Transversal skills (TS)**

**TS1:** to apply professional evaluation standards, to act according to professional ethics, as well as the provisions of the legislation in force. To promote logical reasoning, practical applicability, assessment and self-assessment in decision-making.
**TS2:** to perform activities and to exercise the roles specific to teamwork within the OMF surgery setting /department; to promote initiative, dialogue, cooperation, positive attitude and respect for others, empathy, altruism and continuous improvement of professional activities;
**TS3:** to assess systematically personal skills, roles and expectations, to apply self-assessment to learned processes, acquired skills and professional needs, effective use of language skills, knowledge ofinformation technologies, research and communication skills to deliver qualitative services and to adapt to the dynamics of policy requirements in health care and to carry on personal and professional development.

* **Learning outcomes**

**At the end of the course, the students will be able to:**

* To know the instruments used in oral and maxillofacial surgery;
* To know indications and contraindications for dental extractions;
* To understand the principles of preparing physician and patient for dental extraction;
* To know the technique and stages of dental extraction with forceps and elevators;
* To understand techniques of minimally invasive dental extraction;
* To know the principles of dental extraction by alveolotomy;
* To be able to evaluate the particularities of dental extractions in patients with concomitant diseases;
* To be able to use the knowledge of antibiotic prophylaxis particularities in dentoalveolar and maxillofacial surgery;
* To be able to deduce the possible causes of dental extraction accidents and complications;
* To be able to recognize earlymedical emergency and to provide medical first aid;
* Tobe able to implement the knowledge gained in the research activity;
* To be able to use critically and confidently scientific information using information and communications technologies (ICT).
1. **INDIVIDUAL WORK OF STUDENTS**

| No. |  Expected product | Work strategies  | Assessment criteria | Period of accomplishment |
| --- | --- | --- | --- | --- |
| 1. | Work with information sources | Analysis and synthesis of the material studied on the subject.Reflection on the topic questions.Selection of additional information sources on the topic and its study.Reading the information carefully and describing the essentials.Generalizing and drawing conclusions on the topic/subject importance. | Ability to extract the essentials.Interpretative skills. Ability to analyze and communicate and discuss the material studied independently**.** | During the semester |
| 2. | Case problem solving | Solving case problems, drawing conclusions and making arguments at the end of each practical work. Verification of outcomes and appreciation of outcome achievement. Selection of additional information, using websitesand additional bibliography. | Quality of solving problems and clinical cases.Ability to formulate and interpret clinical and paraclinical data.Ability to analyze the selected information from national and international professional websites. | During the semester |
| 3. | **Evaluation of perception (basic knowledge) and knowledge of instruments used for odontectomy.Evaluation of methods and complications that may occur during odontectomy in OMF surgery setting / department.**Each student will complete the patient's medical record, systematize the stages of clinical examination and collect the anamnesis. Establishing indications and contraindications for odontectomy. Assessment of therapeutic conduct in management of complications. |
| 3.1. | Schematic recording of instruments | Work with bibliographic sources in the systematization of instrumentarium for odontectomy | Assessment of accomplishment correctness. | During the semester |
| 3.2. | Assessment of odontectomy indications | Study of odontectomy particularities and arguing the need for dental extraction. | Assessment of information accuracy. | During the semester |
| 3.5. | Creating projects | Preparing Power Point presentations on the information selected from the syllabus topics. | Assessment of selected material quality, project design and ability to reproduce the information. | During the semester |

1. **TEACHING- LEARNING-ASSESSMENT METHODOLOGY**
* ***Teaching and learning methods***

When teaching the subject of odontectomy in OMF surgery, different teaching methods and strategies are used, aimed at efficient acquisition and achievement of learning objectives. The course entails lectures, seminars, practical and individual work. The odontectomy course is held in the 4th semester by the course holder/subject leader. The following forms of training are used in the practical work: frontal and individual activity, group discussions, simulation cases, case studies, brainstorming activities. The literature available in the university library is used as a teaching aid, along with methodological recommendations of the department's staff, tables, schemes, electronic information resources, national and international professional websites, etc. Students receive individual assignments that are presented for group discussions, subsequently the quality of individual work and practical skills being assessed. In order to learn the material and acquire teambuilding skills, during the semester the students perform a mini-research in the field, the results of which are presented during seminars and practical lessons organized in the last month of the semester.

Learning methods used in the teaching process are as follows: *learning of the theoretical material*using lecture material and textbooks; *observation* - identifying the characteristic features of doctor-patient communication; *analysis* - use of methods of appreciation of indications and contraindications for dental extraction; *comparison* - comparison by analysis of instruments used in oral and maxillofacial and dento-alveolar surgery according to their advantages and disadvantages; *algorithm* *elaboration* - selection of mandatory elements and algorithm elaboration for consulting the patient with concomitant diseases; *modeling* - identifying and selecting the elements necessary to detect emergency situations caused by dental extraction.

* ***Teaching strategies / techniques***
 Frontal, individual, brainstorming, group discussion, clinical case analysis, teambuilding activities, clinical exam simulation, mini-research, comparative analysis.
* ***Methods of assessment*** *(including the way the final mark is calculated)*

**Current:** Current assessment during seminars and practical work, 3 summative assessments in written form and/or current tests. For individual work during the semester, the student is assessed, the grade being included insummative assessments. At the end of the semester, based on the summative assessment marks, the average annual mark is calculated.
**Final:** The course ends with a credit test. The mark at the credit test is based on the annual average mark. The marks above 5 are equivalent to "passed", which will be recorded in the student’s report card (gradebook). The annual average mark is expressed in numbers according to the grid of assessment mark scaling.

**Scaling of marks for assessments**

**Method of mark rounding**

| Grid of intermediary marks (anual average mark, final examination mark) | Grading system | ECTSEquivalent |
| --- | --- | --- |
| **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**  |
|  |  |  |

The annual average mark and final examination marks (computer test, written test, oral test) will be expressed in numbers according to the grid of marks (see table above), while the final mark will be expressed in a number with two decimal digits, which will be recorded in the student’s report card (gradebook).

***Note:*** *Students` unexcused absence at the final examination is qualified with „absent” and is equivalent to „0” (zero). The students have the right to retake the failed examination twice.*

1. **Recommended bibliography:**

*A. Compulsory:*

1. Materialele prelegerilor.
2. Băciuţ g. Urgenţe medico-chirurgicale în stomatologie. Cluj-Napoca: Editura Medicală Universitară “Iuliu Haţieganu”, 2002.
3. Bucur A., Cioacă R. Urgenţe şi afecţiuni medicale în cabinetul stomatologic: note de curs. Bucureşti: Editura Etna, 2004.
4. Burlibaşa C. Chirurgie orală şi maxilo-facială. Bucureşti: Editura Medicală, 1997.
5. Chele N. Implantarea dentară imediată. Riscuri și beneficii. Chișinău: S.n., 2017.
6. Timoşca G., Burlibaşa C. Chirurgie buco-maxilo-facială. Chişinău: Universitas, 1992.
7. Zănoagă O. Chirurgia orală și tratamentul antitrombotic – incidente și riscuri. Chișinău: S.n., 2017.
8. Бернадский Ю. И. Основы челюстно-лицевой хирургии и хирургической стоматологии, 3-e изд. Перераб. и доп. Москва: Медицинская литература, 2007.
9. Тимофеев А. А. Руководство по челюстно-лицевой хирургии и хирургической стоматологии. Киев: 000 «Червона Рута-Туре», 2012.
10. Moore U. J. Principles of Oral and Maxillofacial Surgery. Sixth Edition, Wiley-Blackwell, 2011.
11. Peterson Larry. Principles of Oral and Maxillofacial Surgery. Second Edition, BC Decker Inc, 2004.

*B. Supplimentary:*

1. Bucur A. Managementul afecțiunilor chirurgicale oro-maxilo-faciale. București: Editura didactică și pedagogică, R.A, 2012.
2. Gănuţă N. Chirurgie oro-maxilo-facială. Vol.II. Bucureşti: Editura Medicală Naţională, 1998.
3. Voroneanu M., Bucur A., Vicol C., Dinescu N. Actualități privind riscul urgențelor medicale în cabinetul de medicină dentară. Iași: Editura PIM, 2007.
4. Zănoagă O. Hemoragiile postextracționale dentare. Teză de doctor în științe medicale. Chişinău, 2010.
5. Zănoagă O., Topalo V. Hemoragia postextracțională dentară la adult.Protocol clinic național. 2015.
6. Кулакова А. А., Робустова Т. Г., Неробеева А. И. Хирургическая стоматология и челюстно-лицевой хирургия. Москва: Гэотар Медия, 2010.
7. Панчишин М., Готь И., Масный З. Неотложные состояния в стоматологической практике. Львов: ГалДент, 2004.
8. Робустова Т. Г. Хирургическая стоматология и челюстно-лицевой хирургия. Москва: Гэотар Медия, 2010.
9. Тимофеев А. А. Челюстно-лицевой хирургия. Киев: Медицина, 2015.
10. Hupp James R., Ellis III Edward, Tucker Myron R. Contemporary Oral and Maxillofacial Surgery. Fifth Edition. Mosby Elsevier, 2008.
11. Koerner Karl R. Manual of Minor Oral Surgery for the General Dentist. Blackwell Munksgaard, 2006.