

Federal State Budgetary Educational Institution  
of Higher Education  
"NORTH OSSETIAN STATE MEDICAL ACADEMY"  
of the Ministry of Health of the Russian Federation



**Department of Dentistry No. 2**

**METHODOLOGICAL RECOMMENDATIONS FOR STUDENTS**

**MODULE**

**"ORAL SURGERY"**

**Vladikavkaz**

**TOPIC:**  
**TEETHING DISEASES,**  
**COMPLICATIONS OF WISDOM TEETH ERUPTION,**  
**ODONTOGENIC PERIOSTITIS OF THE JAWS**

**RELEVANCE OF THE TOPIC**

Teething diseases are a very common pathology, and abscesses and phlegmons of the maxillofacial region as complications of difficult eruption of the lower wisdom tooth occur in 15-20% of patients and are characterized by a severe clinical course, since the tissues of the distal parts of the bottom of the oral cavity, oropharynx and lower jaw are involved in the inflammatory process.

Periostitis of the jaws is one of the most frequent nosological units with which a dental surgeon meets daily at an appointment in a polyclinic. Therefore, a timely and correct diagnosis of the above-mentioned diseases allows for adequate surgical and drug treatment, as well as to prevent the development of severe complications of a general and local nature.

**THE GENERAL PURPOSE OF THE LESSON**

To be able to identify the main signs of difficult eruption of wisdom teeth, as well as odontogenic periostitis of the jaws, their complications, to draw up a scheme of examination and treatment of patients with these diseases.

**TO REALIZE THE OVERALL GOAL OF THE LESSON, YOU NEED TO BE ABLE TO:**

| Specific goals                                                                                                                     | Goals of the initial level of knowledge                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. To identify the main etiological, pathogenetic factors and anatomical prerequisites for difficult eruption of the wisdom tooth. | 1. To interpret the timing of wisdom teeth eruption, topographic and anatomical relations of soft tissues and branches of the lower jaw in the area of the lower wisdom tooth (Department of Anatomy, Department of Topographic Anatomy, Department of Radiology). |
| 2. To determine the clinical signs of difficult eruption of the wisdom tooth.                                                      | 2. Interpret the data of complaints and anamnesis to identify symptoms of acute inflammatory process (Department of Propaedeutics of Internal Diseases, Department of General Surgery, Department of Surgical Dentistry)                                           |
| 3. Identify clinical signs of acute and chronic periostitis of the jaws, use classification for diagnosis.                         | 3. Interpret the data of clinical laboratory and radiological examination methods (Department of Internal Diseases, Department of Radiology).                                                                                                                      |

|                                                                                                                                                    |                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4. To carry out differential diagnosis of acute and chronic periostitis on the basis of clinical and X-ray examination data.                       | 4. To be guided in the methods of clinical and radiological examination of the maxillofacial region (Department of Internal Diseases, Department of Radiology).                   |
| 5. Draw up a scheme of examination of patients with difficult wisdom tooth eruption, acute and chronic periostitis.                                | 5. To use knowledge of methods of local anesthesia during surgical interventions on the face and jaws, methods of tooth extraction operations (Department of Surgical Dentistry). |
| 6. To determine the indications for the types of surgical and conservative treatment of obstructed wisdom tooth eruption, odontogenic periostitis. |                                                                                                                                                                                   |

### **TASKS FOR SELF-CONTROL AND SELF-CORRECTION OF THE INITIAL LEVEL OF KNOWLEDGE**

Task 1.

Name the timing of the eruption of wisdom teeth.

1. 10-15 years.
2. 18-33 years old.
3. 34-40 years old.
4. 41-45 years old.
5. 46-50 years old.

Task 2.

Name the size of the periodontal gap of the teeth.

1. 0.05-0.10 mm
2. 0.15-0.25 mm
3. 0.26-0.30 mm
4. 0.31-0.35 mm
5. 0.36-0.40 mm

Task 3.

The chronic nonspecific inflammatory process is characterized by:

1. Severe hyperemia, swelling in the affected area.
2. The presence of fistulas.
3. High body temperature.
4. Sharp pain in the affected area.

5. Pronounced functional disorders.

Task 4.

Specify the percentage of the number of segmented neutrophils in the blood of a healthy person.

1. 20-30%.
2. 1-3%.
3. 45-70%.
4. 12-20%.
5. 70-80%.

Task 5.

Choose from the following the most optimal X-ray installation to identify the pathological process in the area of the lower jaw branch.

1. Occlusive radiography.
2. Axial radiography.
3. Semi-axial radiography.
4. Survey radiography in direct and lateral projections.
5. Radiography by Kovalenko.

Task 6.

Specify on which day of wound treatment there is a transition from the macrophage phase to the fibroblastic phase.

1. For 1-2 days.
2. For 4-5 days.
3. For 6-10 days.
4. For 9-10 days.
5. During the first day.

Task 7.

Specify the depth of the needle advance with the extraoral submandibular method of mandibular anesthesia.

1. 0.5 cm
- . 2. 1.5-2 cm
- . 3. 3.5-4 cm.
4. 5-6 cm.
5. 5.5-6.6 cm.

Task 8.

Are there absolute contraindications to tooth extraction?

1. Yes, there are.
2. Exist only in the elderly.
3. Exist only in children.
4. There are no absolute contraindications.
5. There are, but their number is extremely limited.

Correct answers to tasks: 5-4; 6-3.

If the student finds that he is not ready to solve one or more tasks, he must replenish his initial level of knowledge from the relevant sources of information.

After checking the initial level of knowledge, you can begin an in-depth study of this topic.

## **TRAINING CONTENT:**

### **THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO CARRY OUT TARGETED ACTIVITIES.**

1. Difficult eruption of wisdom teeth: etiology, pathogenesis, clinic, diagnostic methods.
2. Principles of treatment of obstructed eruption of wisdom teeth.
3. Complications of wisdom teeth eruption: clinic, diagnosis, treatment.
4. Acute odontogenic periostitis of the jaws: clinic, diagnosis, treatment and prevention.
5. Chronic odontogenic periostitis of the jaws: clinic, diagnosis, treatment and prevention.

Relevant information will help you master these questions.

### **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION THE TOPIC UNDER STUDY**

Task 1.

Patient N., 22 years old, turned to a dental surgeon with complaints of pain in the left corner of the lower jaw, limited opening of the oral cavity, pain when swallowing. After examination of the patient, the recurrent nature of pericoronitis accompanying the difficult eruption of the 38th tooth was established. What is the tactics of a dental surgeon?

1. Radical excision of the gingival hood.
2. Conducting a course of antibacterial therapy.
3. Wisdom tooth extraction.
4. Dissection of the gingival hood.
5. Washing of the subcapular space with antiseptic solutions.

#### Task 2.

Patient S., 20 years old, turned to a dental surgeon about a difficult eruption of the 48th tooth. X-ray examination revealed bone resorption in the area of the interdental septum between 47 and 48 teeth. What is the tactics of a dental surgeon?

1. Removal of 47, 48 teeth.
2. Extraction of 48 teeth, dynamic observation of 47 teeth.
3. Conducting a course of antibacterial therapy, stimulation of osteogenesis.
4. Removal of 48 teeth, scraping the destruction site to a dense bone and filling the resulting defect with hydroxyapatite derivatives.
5. Depulpation 47, removal of 48 teeth.

#### Task 3.

Paresthesia of the lower lip is observed in periodontitis with localization of the inflammatory process in the area:

1. Incisors.
2. Molars.
3. Fangs.
4. Individually.
5. Premolars.

#### Task 4.

The cause of rarefying periostitis is most often:

1. Injury.
2. Periodontitis tooth.
3. Jaw cysts.
4. Inflammatory processes in soft tissues.
5. Inflammatory processes in the lymph nodes.

#### Task 5.

Patient N., 45 years old, turned to a dentist with complaints of facial asymmetry due to swelling of the right subglacial region, moderate pain in the area of the 13th tooth, increased body temperature - up to 37.7 C. 13 the tooth has been destroyed for a long time, has not been treated, the day before it became sharply painful, especially when touched. This morning, the pain in the area of the 13th tooth has significantly

decreased, but there was swelling of the right subglacial area. What is the most likely diagnosis?

1. Acute serous periodontitis of the 13th tooth.
2. Acute purulent periodontitis of the 13th tooth.
3. Exacerbation of chronic periodontitis of the 13th tooth.
4. Acute serous periostitis of the upper jaw from the 13th tooth.
5. Acute purulent periostitis of the upper jaw from the 13th tooth.

Task 6.

Patient R., 47 years old, turned to a dentist with complaints of throbbing pain in the area of the left lateral teeth of the upper jaw, facial asymmetry, body temperature increased to 38C. 25 the tooth was destroyed a long time ago, a week ago it became sharply painful, especially when touching.

Three days ago, the pain in the tooth area decreased significantly, but there was swelling in the area of the left cheek. Then the pain began to increase again, the swelling increased, the body temperature increased. Upon examination, it was found that the crown of the tooth 25 is destroyed, the tooth is mobile, the transitional fold on the vestibular side at the level of the upper left premolars is smoothed, fluctuates, sharply painful on palpation. The swelling of soft tissues in the left suborbital and buccal areas is significantly pronounced. What is the most likely diagnosis?

1. Acute serous periodontitis of the 25th tooth.
2. Acute purulent periodontitis of the 25th tooth.
3. Exacerbation of chronic periodontitis of the 25th tooth.
4. Acute serous periostitis of the upper jaw from the 25th tooth.
5. Acute purulent periostitis of the upper jaw from the 25th tooth.

Task 7.

Patient L., 35 years old, turned to a dentist with complaints about the presence of a sealing area in the area of the 35th tooth. 35 tooth depulped, slightly painful with percussion. At the level of this tooth, a slightly painful seal, rounded in shape with a smooth surface, is palpated along the transitional fold. The mucous membrane in this area is slightly hyperemic. The lymph nodes in the left submandibular triangle are enlarged, compacted, mobile, painless. What diagnosis do you think is most likely?

1. Acute serous periostitis of the lower jaw from the 35th tooth.
2. Acute purulent periostitis of the lower jaw from the 35th tooth.
3. Chronic simple periostitis of the lower jaw from the 35th tooth.
4. Chronic ossifying periostitis of the lower jaw from the 35th tooth.
5. Chronic rarefying periostitis of the lower jaw from the 35th tooth.

Task 8.

As a result of the examination, patient N., 34 years old, was diagnosed with acute purulent periostitis of the upper jaw from the 15th tooth with localization of a subcostal abscess from the side of the hard palate. What method is used to open the subcostal abscess on the hard palate?

1. By a linear incision parallel to the alveolar process.
2. A linear incision parallel to the median seam.
3. Incision with excision of a small area of tissue.
4. By cutting out the flap on the leg.
5. A linear incision perpendicular to the median seam.

Correct answers to tasks: 3-2, 4-1.

## **ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON**

At the beginning of the lesson, the control of the initial level of knowledge on test tasks is carried out to determine the initial level of knowledge.

After summing up the results of the control of the initial level of knowledge, students, under the supervision of a teacher, begin to curate patients with complications of wisdom teeth eruption, odontogenic periostitis of the jaws who have applied to a polyclinic or are in a hospital; take part in performing individual diagnostic and therapeutic manipulations; analyze data from clinical and laboratory methods of examination of patients, solve situational clinical tasks.

At the end of the lesson, the final test control of the assimilation of the studied topic is summed up. The actions of students during the curation of patients are analyzed. The result is summed up. A task is given for the next lesson.

## TECHNOLOGICAL MAP OF THE PRACTICAL LESSON

| Stages of practical training                                                                                                                                                                                                                                                    | Time in min. | Equipment                                                                                                         | Venue                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Checking the initial level of students' knowledge                                                                                                                                                                                                                               | 20           | A set of test tasks to control the initial level of knowledge.                                                    | Study room                                                   |
| Under the supervision of a teacher, students curate patients with complications of wisdom teeth eruption, perform individual therapeutic and diagnostic manipulations with the help of a teacher; analyze data from clinical and laboratory methods of examination of patients. | 155          | Medical documentation of polyclinic and hospital, situational tasks. Graph of the logical structure of the topic. | Maxillofacial department or surgical office of a polyclinic. |
| Analysis and correction of the assimilation of the studied topic. Final test control.                                                                                                                                                                                           | 30           | Test tasks to control the assimilation of the topic                                                               | Study room                                                   |
| Summing up the lesson                                                                                                                                                                                                                                                           | 15           |                                                                                                                   | Study room                                                   |

### Recommended literature:

#### Main:

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

#### Additional:

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.
3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007
4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC SECTION  
COMPLICATIONS OF ERUPTION OF THE LOWER WISDOM TOOTH

|                                              |
|----------------------------------------------|
| COMPLICATIONS OF ERUPTION LOWER WISDOM TOOTH |
|----------------------------------------------|

PATHOGENESIS

|                                                                     |                                                                                                                                                                  |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| primary inflammation of the mucous membrane above the wisdom tooth. | unfavorable topographic and anatomical relationships of the lower wisdom tooth with the surrounding tissues due to the lack of space in the jaw for its eruption |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|

CLASSIFICATION OF INFLAMMATORY COMPLICATIONS

|                 |                        |                                         |                         |
|-----------------|------------------------|-----------------------------------------|-------------------------|
| Pericoronaritis | Retromolar periostitis | Retromolar (pericoronary) osteomyelitis | Phlegmons and abscesses |
|-----------------|------------------------|-----------------------------------------|-------------------------|

TREATMENT OF INFLAMMATORY COMPLICATIONS

|                                                                      |                                                                                               |                                                                            |                                                                                                      |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 1. Conservative<br>2. Conservative-orthopedic<br>3. Radical-surgical | 1. Wisdom tooth extraction<br>2. Periostotomy<br>3. Antibacterial therapy<br>4. Physiotherapy | 1. Wisdom tooth extraction<br>2. Antibacterial therapy<br>3. Physiotherapy | 1. Wisdom tooth extraction, opening of an abscess or phlegmon<br>2. Drug therapy<br>3. Physiotherapy |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|

**GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC SECTION**  
**ACUTE ODONTOGENIC PERIOSTITIS OF THE JAWS: CLINIC,**  
**DIAGNOSIS, TREATMENT**

**ACUTE PURULENT PERIOSTITIS OF THE JAWS**

**SURVEY METHODS**

| clinical                                                                                        | laboratory                                                                            |
|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1. Complaints<br>2. Anamnesis<br>3. Examination:<br>- inspection<br>- percussion<br>- palpation | 1. General blood test<br>2. Seeding of the discharge from the wound<br>3. Radiography |

**SYMPTOMS**

| clinical                                                                                                                                                                         | laboratory                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 1. Moving pain away from the causal tooth<br>2. Limited infiltration on the alveolar process<br>3. Regional lymphadenitis<br>4. Increased body temperature<br>5. General malaise | 1. Moderate leukocytosis in the blood<br>2. Bone destruction in the area of the root tip of the causal tooth |

**DIFFERENTIAL DIAGNOSIS**

|                                       |                                             |
|---------------------------------------|---------------------------------------------|
| Exacerbation of chronic periodontitis | Acute odontogenic osteomyelitis of the jaws |
|---------------------------------------|---------------------------------------------|

**TREATMENT**

| surgical                                                    | medicinal                                                  | physiotherapy                     |
|-------------------------------------------------------------|------------------------------------------------------------|-----------------------------------|
| 1. Removal of the causal tooth<br>2. Opening of the abscess | 1. Antibacterial<br>2. Painkillers<br>3. Anti-inflammatory | 1. ASB<br>2. UHF<br>3. Compresses |

**TOPIC:**

**ACUTE ODONTOGENIC OSTEOMYELITIS OF THE JAWS:**

**ETIOLOGY, PATHOGENESIS, CLINIC, DIAGNOSIS AND TREATMENT**

**RELEVANCE OF THE TOPIC**

Among odontogenic inflammatory processes, odontogenic osteomyelitis occupies a special place due to the severity of the clinical course. For the development of acute odontogenic osteomyelitis of the jaws, a state of sensitization of the body, neurotrophic disorders of the jaw bones, circulatory disorders with thrombosis of the blood vessels feeding them, etc. is necessary. The severity of the clinical course of acute odontogenic osteomyelitis of the jaws is aggravated by the fact that, based on the above pathophysiological background of the body, purulent inflammation of all layers of bone occurs: bone marrow, bone substance, periosteum with a mandatory necrotic component.

Timely and correctly diagnosed acute odontogenic osteomyelitis allows for adequate treatment and prevent the development of severe complications of a general and local nature.

**THE GENERAL PURPOSE OF THE LESSON**

To be able to identify and evaluate the main signs of acute odontogenic osteomyelitis of the jaws, to draw up a scheme of examination and treatment of the patient.

**TO REALIZE THE OVERALL GOAL OF THE LESSON, YOU NEED TO BE ABLE TO**

| Specific goals                                                                                                                 | Goals of the initial level of knowledge                                                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. To identify the main etiological and pathogenetic factors of the development of acute odontogenic osteomyelitis of the jaws | 1. Interpret clinical and morphological signs of acute inflammation (Department of Pathological Physiology, Department of Pathological Anatomy)                                                   |
| 2. To determine the clinical signs of acute odontogenic osteomyelitis of the jaws.                                             | 2. Interpret the patient's complaints, anamnesis of the disease, objective examination data (Department of Internal Diseases, Department of Surgical Diseases, Department of Surgical Dentistry). |
| 3. To identify and interpret the features of the course of acute odontogenic osteomyelitis of the upper and lower jaws.        | 3. Interpret the features of the anatomical structure, blood supply and innervation of the jaw bones (Department of Normal Anatomy).                                                              |

|                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4. Make a scheme of examination of a patient with acute odontogenic osteomyelitis of the upper or lower jaw, evaluate the data of additional examination methods. | 4. Interpret the data of clinical and biochemical analyses of blood, urine, oral microflora and wound contents, navigate the radiological methods of examination of the maxillofacial region and interpret the examination data (Department of Biochemistry, Department of Pathological Physiology, Department of Microbiology) |
| 5. To draw up and justify a plan for surgical and drug treatment of a patient with acute odontogenic osteomyelitis of the jaws.                                   | 5. To choose and justify the method of anesthesia in the treatment of patients with acute odontogenic inflammatory process, to interpret the pharmacokinetics of drugs used in the treatment of acute inflammatory processes (Department of Surgical Dentistry, Department of Pharmacology).                                    |

## **TASKS FOR SELF-CONTROL AND SELF-CORRECTION**

### **THE INITIAL LEVEL OF KNOWLEDGE**

#### **Task 1.**

Select the signs that characterize the acute inflammatory process when collecting anamnesis.

1. Rapid increase in body temperature and local temperature, rapid development of hyperemia and edema.
2. Slow development of the disease, subfebrility.
3. Formation of the fistula course.
4. The appearance of an ulcer at the site of the disintegrating infiltrate.
5. Formation of sequestrers.

#### **Task 2.**

What features of the anatomical structure of the jaw bones are of decisive importance in the development of osteomyelitis?

1. The number of processes on the jaw bone.
2. The ratio of spongy and cortical matter.
3. The height of the alveolar process.
4. The presence of bone sutures.

## 5. Availability of channels.

### Task 3.

Specify the number of eosinophils in a healthy person's blood smear.

1. 0-5%.
2. 10-12%.
3. 0-15%.
4. 12-23%.
5. 20-30%.

### Task 4.

Specify under what conditions a bacteroid infection does not develop.

1. With hypoxia, violation of microcirculation.
2. With a decrease in the resistance of the mucous membrane.
3. With hypercapnia, aeration of tissues.
4. When bacteria produce  $\beta$ -lactose.
5. With local hyperthermia of tissues.

### Task 5.

With what X-ray examination can the pathological changes in the lower jaw be most fully assessed?

1. Axial radiography of the bones of the facial skeleton.
2. Schuller radiography.
3. Radiography by Kovalenko.
4. Survey radiography in direct and lateral projections.
5. Semi-axial radiography of the bones of the facial skeleton.

### Task 6.

With a lack of which of the listed substances, the symptoms of novocaine intoxication increase?

1. Vitamin B1.
2. Vitamin B6.
3. Vitamin E.
4. Ascorbic acid.

5. Nicotinic acid.

Task 7.

What concentration of chlorhexidine is used to treat purulent wounds?

1. 5-6% solution.
2. 0.1-0.2% solution.
3. 1-2% solution.
4. 10% solution.
5. 0.5-1% solution.

Correct answers to tasks: 3-1, 6-4.

If the student finds that he is not ready to solve one or more tasks, he must replenish his initial level of knowledge from the relevant sources of information.

After checking the initial level of knowledge, you can begin an in-depth study of this topic.

### **TRAINING CONTENT:**

#### **THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO CARRY OUT TARGETED ACTIVITIES**

1. Etiology and pathogenesis of osteomyelitis: the essence of the theories of Lexer-Bobrov, S.M. Derizhanov, G.I. Semenchenko, G.A. Vasilyeva, Ya.M. Snezhko.
2. Features of the clinical course of acute odontogenic osteomyelitis of the upper and lower jaw.
3. Methods of diagnosis of acute odontogenic osteomyelitis of the jaws.
4. Differential diagnosis of acute odontogenic osteomyelitis of the jaws with acute purulent periodontitis and periostitis.
5. Principles of surgical and medical treatment of acute odontogenic osteomyelitis of the jaws.
6. Possible complications of acute odontogenic osteomyelitis of the jaws, their prevention.

Relevant information will help you master these questions.

## **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION THE TOPIC UNDER STUDY**

### **Task 1.**

A 30-year-old patient has been suffering from pain in the area of the 38th tooth for a long time. 38 the tooth has been destroyed for a long time, has not been treated, periodically the pain worsens. Three days ago, after hypothermia, the pain in the area of the 38th tooth increased dramatically. The body temperature rose to 39 ° C, sweating, weakness appeared. The next day, numbness of the lower lip and chin appeared on the side of the lesion, limited opening of the mouth to 1 cm, irradiation of pain in the ear and neck. Upon examination, pronounced facial asymmetry is determined due to edema and inflammatory infiltration in the area of the left corner of the lower jaw, regional lymphadenitis, inflammatory contracture of the lower jaw of the III st., fusiform swelling of the lower jaw in the area of its left corner. The crown of 38 teeth with a deep carious cavity, the tooth is movable of the III st., intact 36 and 37 teeth are movable. The transitional fold is smoothed. Specify the most likely diagnosis.

1. Acute purulent periodontitis of the 38th tooth.
2. Exacerbation of chronic periodontitis of the 38th tooth.
3. Pericoronaritis in the area of the 38th tooth.
4. Acute purulent periostitis of the lower jaw from the 38th tooth.
5. Acute osteomyelitis of the lower jaw from 38 teeth.

### **Task 2.**

A 25-year-old patient suffering from chronic periodontitis of the 46th tooth with periodic exacerbations of the inflammatory process turned to the dental clinic with complaints of weakness, sharp pain in the lower jaw area on the right, facial asymmetry, inability to chew due to pain and limited opening of the oral cavity, body temperature 38.5 °C. The disease began three days ago, after a psychological trauma suffered by the patient, and its clinical manifestations tend to increase. After examining the patient, the dentist decided to send him to a dental hospital with a diagnosis of Acute odontogenic osteomyelitis of the lower jaw. On what basis is such a diagnosis established?

1. Based on electrodontometry data.
2. Based on ultrasound data.
3. Based on the assessment of the clinical course of the disease.
4. Based on an X-ray examination conducted in the first three days from the onset of the disease.
5. Based on laboratory research data.

### Task 3.

A 40-year-old patient turned to a dental clinic with complaints of high body temperature (up to 39.5 ° C), weakness, dizziness, sharp pain in the right half of the upper jaw with irradiation to the temple and eye, facial asymmetry due to edema and inflammatory infiltration of the right cheek. The development of the disease is associated with the destroyed 16 tooth. The doctor diagnosed: acute odontogenic osteomyelitis of the upper jaw from the 16th tooth, phlegmon of the right cheek. What are the tactics of treatment and management of the patient?

1. Conservative treatment of the tooth, autopsy and drainage of phlegmon in outpatient settings.
2. Autopsy and drainage of phlegmon on an outpatient basis.
3. Removal of the "causal" tooth, opening and drainage of the phlegmon on an outpatient basis.
4. Dissection and drainage of the phlegmon, trepanation of the "causal" tooth, followed by its conservative treatment on an outpatient basis.
5. Removal of the "causal" tooth, opening and drainage of the phlegmon in a hospital.

### Task 4.

A 30-year-old patient was admitted to the maxillofacial department for acute odontogenic osteomyelitis of the lower jaw (destructive form). Along with the removal of the "causal" tooth and periostotomy, osteoperforation and lavage of the lower jaw are supposed to be performed. Osteoperforation and lavage of the jaw is carried out primarily for the purpose of:

1. Reduction of pain syndrome.
2. Conducting antibacterial therapy in the focus of inflammation.
3. Reduction of intraosseous pressure in the affected jaw.
4. To confirm the diagnosis (for diagnostic purposes).
5. Bone aeration.

### Task 5.

A 45-year-old patient turned to a dental clinic for acute odontogenic osteomyelitis of the lower jaw, phlegmon of the chewing space. The concomitant disease is diabetes mellitus. What are the actions of the dental surgeon of the polyclinic?

1. Removal of the "causal" tooth, drainage of the phlegmon.
2. Removal of the "causal" tooth, drainage of the phlegmon, referral of the patient to an endocrinologist.

3. Consultation with an endocrinologist, then removal of the "causal" tooth and drainage of the phlegmon.
4. Hospitalization of the patient in the maxillofacial department.
5. Removal of the "causal" tooth, hospitalization of the patient in the hospital.

#### Task 6.

A 35-year-old patient was admitted to the maxillofacial department for acute odontogenic osteomyelitis of the lower jaw, complicated by phlegmon of the submasseterial and pterygomandibular spaces. What, in your opinion, is the localization of the inflammatory process in the lower jaw?

1. Alveolar process.
2. The body.
3. Angle.
4. The chin section.
5. Condyle process.

#### Task 7.

A 45-year-old patient was admitted to the maxillofacial department with complaints of high body temperature ( $41^{\circ}\text{C}$ ), confusion, facial asymmetry due to inflammatory infiltrate occupying the entire right half of it. During the examination, the doctor established acute odontogenic osteomyelitis in the area of the right hillock of the upper jaw with the spread of the inflammatory process into the eye socket, the subtemporal and temporal fossa. Attention is drawn to the low blood pressure - 90/60 mmHg, pulse 120 beats per minute, arrhythmic, weak filling and tension; wet wheezing during auscultation of the lungs and the absence of respiratory noises over the lower lobe of the right lung, as well as inflammatory infiltrates in the calf muscles. What complication of acute odontogenic osteomyelitis of the upper jaw occurred?

1. Phlebitis and thrombosis of facial veins.
2. Phlebitis and thrombosis of the veins of the cavernous sinus.
3. Sepsis.
4. Sinusitis.
5. Mumps.

Correct answers to tasks: 6-3, 7-3.

## ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON

At the beginning of the lesson, the initial level of knowledge on test tasks is monitored to determine the initial level of knowledge.

After summing up the control of the initial level of knowledge and their correction, students, under the supervision of a teacher, begin to curate patients with acute odontogenic osteomyelitis of the jaws in the hospital; take part in performing individual diagnostic and therapeutic manipulations; analyze data from clinical and laboratory methods of examination of patients; solve situational clinical tasks.

At the end of the lesson, the final test control of the assimilation of the studied topic is summed up. The actions of students during the curation of patients are analyzed. The result is summed up. A task is given for the next lesson.

## TECHNOLOGICAL MAP OF THE PRACTICAL LESSON

| Stages of practical training                                                                                                                                                                                                                                                                                                                                                      | Time in min. | Equipment                                                                                                         | Venue                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Checking the initial level of students' knowledge                                                                                                                                                                                                                                                                                                                                 | 20           | A set of test tasks to control the initial level of knowledge.                                                    | Study room                                                   |
| Under the supervision of a teacher, students curate patients with acute odontogenic osteomyelitis of the jaws, perform individual therapeutic and diagnostic manipulations with the help of a teacher; analyze data from clinical and laboratory examination of patients; draw up a treatment regimen for patients with acute odontogenic osteomyelitis; solve situational tasks. | 155          | Medical documentation of polyclinic and hospital, situational tasks. Graph of the logical structure of the topic. | Maxillofacial department or surgical office of a polyclinic. |
| Analysis and correction of the assimilation of the studied topic. Final test control.                                                                                                                                                                                                                                                                                             | 30           | Test tasks to control the assimilation of the topic                                                               | Study room                                                   |
| Summing up the lesson                                                                                                                                                                                                                                                                                                                                                             | 15           |                                                                                                                   | Study room                                                   |

## **Recommended literature:**

### **Main:**

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

### **Additional:**

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.
3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007
4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

**GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC**  
**ACUTE ODONTOGENIC OSTEOMYELITIS OF THE JAWS: ETIOLOGY,**  
**PATHOGENESIS, CLINIC, DIAGNOSIS AND TREATMENT**

**ACUTE OSTEOMYELITIS OF THE JAWS**

| ETIOLOGY                                                                                                                                 | PATHOGENESIS                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Odontogenic</li> <li>2. Post-traumatic</li> <li>3. Hematogenic</li> <li>4. Specific</li> </ol> | <ol style="list-style-type: none"> <li>1. Sensitization</li> <li>2. Violation of bone neurotrophs</li> <li>3. Violation of blood supply to the bone</li> <li>4. Reducing the overall resistance of the body</li> </ol> |

**EXAMINATION OF THE PATIENT**

|                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Anamnesis of the disease</li> <li>2. Inspection of the face and jaws</li> <li>3. Palpation and percussion of teeth</li> <li>4. Radiography of teeth and jaws</li> <li>5. Clinical and biochemical studies of blood and urine</li> <li>6. Sowing of wound contents</li> </ol> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**SYMPTOMS**

| Local                                                                                                                                                                                                                                                                                                      | Common                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Severe radiating pains</li> <li>2. Diffuse inflammatory swelling of the alveolar process</li> <li>3. Vincent's symptom is positive</li> <li>4. Mobility and pain in the teeth next to the causal teeth</li> <li>5. Development of phlegmon, abscesses</li> </ol> | <ol style="list-style-type: none"> <li>1. Weakness, headache, insomnia</li> <li>2. High body temperature, chills</li> <li>3. Sticky sweat</li> <li>4. A drop in hemoglobin, a decrease in the number of red blood cells, an increase in the number of white blood cells, an acceleration of ESR</li> <li>5. The appearance of protein in the urine</li> </ol> |

| COMPLICATIONS                                                                                        | PREVENTION                                                                                                                                  |
|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Transition to a chronic form</li> <li>2. Sepsis</li> </ol> | <ol style="list-style-type: none"> <li>1. Timely removal of the sensitizing factor</li> <li>2. Autopsy of phlegmon and abscesses</li> </ol> |

**TREATMENT**

| Surgical                                                                                                                                                                                    | Conservative                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Removal of the causal tooth</li> <li>2. Wide opening of abscesses and phlegmon near the jaws</li> <li>3. Osteoperforation, bone lavage</li> </ol> | <ol style="list-style-type: none"> <li>1. Novocaine blockades</li> <li>2. Antibacterial therapy</li> <li>3. Detoxification</li> </ol> |

## **TOPIC:**

### **CHRONIC ODONTOGENIC OSTEOMYELITIS OF THE JAWS: ETIOLOGY, PATHOGENESIS, CLINIC, DIAGNOSIS, TREATMENT**

#### **RELEVANCE OF THE TOPIC**

Knowledge of various clinical forms of chronic odontogenic osteomyelitis of the jaws is necessary when conducting differential diagnosis with diseases such as actinomycosis, tuberculosis, malignant tumors of the maxillofacial region. Students' attention should be directed to the fact that with chronic osteomyelitis, against the background of imaginary general well-being and improvement of the patient's well-being, there may be changes in the kidneys, liver, myocardium and other organs as a result of finding chronic foci of inflammation in the periodontal teeth and jaw bone tissue.

#### **THE GENERAL PURPOSE OF THE LESSON**

Be able to recognize clinical symptoms, justify and make a plan for diagnostic examination and treatment of patients with chronic odontogenic osteomyelitis of the upper and lower jaw.

#### **TO REALIZE THE OVERALL GOAL OF THE LESSON, YOU NEED TO BE ABLE TO**

| Specific goals                                                                                                                   | Goals of the initial level of knowledge                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. To identify the main etiological and pathogenetic factors of the development of chronic odontogenic osteomyelitis of the jaws | 1. Interpret anatomical and topographic features of the upper and lower jaw and adjacent soft tissues to interpret the mechanism of development of chronic inflammation in the bones (Department of Normal Anatomy, Department of Topographic Anatomy and Operative Surgery, Department of Pathological Physiology, Department of Pathological Anatomy). |
| 2. To recognize the clinical symptoms of chronic odontogenic osteomyelitis of the upper and lower jaws.                          | 2. Interpret the data of complaints, anamnesis, local and general status of a patient with inflammatory bone disease (Department of Propaedeutic Therapy, Department of General Surgery, Department of Surgical Dentistry).                                                                                                                              |

|                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3. To draw up and justify a plan of examination of patients with chronic odontogenic osteomyelitis.                                                                                                                                                                  | 3. Interpret the data of clinical laboratory and radiological studies in patients with inflammatory bone diseases (Department of Propaedeutic Therapy, Department of General Surgery, Department of Microbiology, Department of Radiology, Department of Surgical Dentistry). |
| 4. To determine indications and contraindications to surgical methods of treatment of chronic osteomyelitis; to draw up and justify a plan for the general treatment and prevention of complications in patients with chronic odontogenic osteomyelitis of the jaws. | 4. Interpret the pharmacological characteristics of the drugs used in the treatment of chronic inflammatory processes of bones (Department of Pharmacology, Department of Surgical Dentistry)                                                                                 |

### **TASKS FOR SELF-CONTROL AND SELF-CORRECTION OF THE INITIAL LEVEL OF KNOWLEDGE**

#### **Task 1.**

Choose from the following the most significant anatomical and topographic features of the structure of the mandible and adjacent soft tissues that affect the duration and severity of the inflammatory process.

1. Massive cortical plates with a large amount of spongy substance.
2. Poor vascularization of the lower jaw (many areas with "closed" blood supply).
3. Well-developed lymphatic system with diverse and multiple outflow to regional lymph nodes.
4. A large number of closed muscle spaces around the lower jaw.
5. All of the above factors.

#### **Task 2.**

Which of the following complaints, anamnesis and objective examination of the patient indicate the presence of chronic inflammation in the jaw?

1. The presence of a causal tooth.
2. Acute onset of inflammation in the bone, which turned into a long-term chronic process.
3. Thickening of the entire bone.

4. The appearance of fistulous passages.
5. All the listed data.

Task 3.

What kind of inflammation prevails in the bone during the chronic course?

1. Alterative.
2. Exudative.
3. Exudative and proliferative.
4. Alterative and exudative.
5. Proliferative.

Task 4.

Which of the following data from clinical, laboratory and radiological studies may indicate chronic osteomyelitis of the jaw?

1. The presence of a causal tooth.
2. Duration of the disease.
3. The presence of sequestrs on the X-ray.
4. There is pronounced leukocytosis and increased ESR in the blood.
5. All the above data.

Task 5.

Which of the following groups of medications are prescribed to a patient with chronic osteomyelitis?

1. Antibacterial osteotropic drugs.
2. Desensitizing drugs.
3. Vitamins.
4. Immunocorrecting agents.
5. All of the above listed tools.

Correct answers to tasks: 1-5, 5-5.

If the student finds that he is not ready to solve one or more tasks, he must replenish his initial level of knowledge from the relevant sources of information.

After checking the initial level of knowledge, you can begin an in-depth study of the topic.

## **TRAINING CONTENT:**

### **THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO CARRY OUT TARGETED ACTIVITIES**

1. Etiology and pathogenesis of chronic odontogenic osteomyelitis of the jaws.
2. Chronic odontogenic osteomyelitis of the upper jaw: features of the clinical course, diagnostic methods,
3. Chronic odontogenic osteomyelitis of the lower jaw: features of the clinical course, diagnostic methods,
4. Surgical methods of treatment of chronic osteomyelitis of the jaws: indications and contraindications, principles of treatment.
5. Local complications of chronic odontogenic osteomyelitis of the jaws: clinic, diagnostic methods and treatment principles.

Relevant information will help you master these questions.

### **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION THE TOPIC UNDER STUDY**

#### **Task 1.**

Patient B., 56 years old, turned to a dental surgeon with complaints of swelling in the lower jaw area on the left. The disease began with acute pain in the 36th tooth, which was removed two months later. Objectively: facial asymmetry due to muff-like thickening of the lower jaw in the area of 35 and 37 teeth. In the submandibular triangle on the left there are two fistulous passages with purulent discharge. Radiologically, at the level of the well 36 of the tooth, there is a focus of destruction of bone tissue of a semi-oval shape with dimensions of 2.0x1.0 cm with clear boundaries, in the middle there is a sequester, but smaller, along its periphery there is a strip of sclerosis. Osteomyelitis of the lower jaw was diagnosed on the left. What clinical form of osteomyelitis does the patient have?

1. Acute odontogenic osteomyelitis of the lower jaw.
2. Chronic odontogenic diffuse osteomyelitis of the lower jaw.
3. Chronic odontogenic focal osteomyelitis of the lower jaw.
4. Chronic odontogenic hyperostous osteomyelitis of the lower jaw.
5. Chronic odontogenic limited osteomyelitis of the lower jaw.

## Task 2.

Patient V., 50 years old, is examined by a dental surgeon for a jaw disease. Objectively: facial asymmetry due to thickening of half of the lower jaw. In the submandibular triangle there are five fistulous passages with bulging granulations and scanty purulent discharge. The mouth opens is limited. The mucous membrane of the entire half of the jaw has a bluish tinge, granulations protrude from some of the holes of the removed teeth. On radiographs, the destruction of bone tissue is determined from the level of 42 teeth to the condyle process in the form of small cavities with small sequesters inside.

Which pathological condition most corresponds to this clinical picture?

1. Acute odontogenic osteomyelitis of the lower jaw.
2. Chronic odontogenic limited osteomyelitis of the lower jaw.
3. Chronic odontogenic focal osteomyelitis of the lower jaw.
4. Actinomycosis of the lower jaw.
5. Chronic odontogenic diffuse osteomyelitis of the lower jaw.

## Task 3.

A dental surgeon examined a patient M., 45 years old, with an exacerbation of chronic diffuse odontogenic osteomyelitis of the upper jaw on the left. Objectively: facial asymmetry due to dense swelling in the under-eye area on the left. The mouth opens is limited. The alveolar process at the level of the wells of the 24-28 teeth is thickened. On the mucosa of the transitional fold there are three fistula passages with growths of granulation tissue and purulent discharge. Radiologically, the destruction of the bone tissue of the alveolar process is determined at the level of the wells of the 24-28 teeth, the anterior wall of the maxillary sinus and the lower edge of the eye socket in the form of shapes of different shapes with the presence of sequesters, along the periphery of which are foci of sclerosis. When and by what approach sequestrectomy is indicated.

1. You need to wait, prescribe anti-inflammatory treatment, and then operate with intraoral access.
2. You need to wait until the sequesters go away on their own.
3. It is necessary to operate immediately and out-of-mouth access.
4. You need to wait, prescribe anti-inflammatory treatment, and then operate with extra-oral access.
5. It is necessary to operate immediately and intraoral access.

## Task 4.

The dental surgeon examined patient N., 38 years old, with chronic odontogenic limited osteomyelitis of the upper jaw on the right. Objectively: facial asymmetry due to swelling in the right suborbital area. The mouth opens somewhat limited. At the level of the hole of the removed 15 tooth, the fistula passage with granulations and pus, the alveolar process is thickened. On radiographs: in the area of 14-16 teeth, the destruction of bone tissue of a semi-oval shape with dimensions of 2.0x1.5 cm is determined, inside the sequester, along the periphery of which there is tissue sclerosis. Make a treatment plan for the patient.

1. Surgical treatment - sequestrectomy.
2. Conservative treatment - drug therapy.
3. Physiotherapy treatment.
4. Medical and physiotherapy treatment.
5. Operative (sequestrectomy), medical (stimulating therapy) and physiotherapy treatment.

#### Task 5.

Patient V., 50 years old, turned to a dental surgeon about chronic odontogenic diffuse osteomyelitis of the lower jaw on the right. Radiologically, the destruction of bone tissue from the level of 42 teeth to the articular process is determined in the form of small cavities with small sequesters inside and areas of sclerosis. There is a strip of healthy tissue along the lower edge of the jaw. The patient is scheduled for sequestration surgery. What is the most likely complication that may occur during surgery?

1. Fracture of the lower jaw.
2. Bleeding.
3. A defect in the bone tissue of the lower jaw is formed.
4. Dislocation asphyxia.
5. Stenotic asphyxia.

#### Task 6.

Patient S., 40 years old, turned to the dentist for an appointment, complaining of periodic discharge of pus from the nasal passage and dull pains in the upper jaw on the right. A year ago, 16 teeth were treated, after which there was swelling of the gums, pus discharge from the nose and in the area of the 16 tooth. Objectively: facial asymmetry due to swelling of soft tissues in the left suborbital area. The mouth opens is limited. The alveolar process in the area of 15, 16, 17 teeth is thickened. On the mucous membrane of the alveolar process there are two fistula passages with purulent discharge. The destruction of bone tissue at the level of 15, 16, 17 teeth with foci of sclerosis on the periphery was revealed radiologically. The periodontal slits of 15,16,17 teeth are dilated. Chronic focal odontogenic

osteomyelitis of the upper jaw on the right was diagnosed. Choose the optimal method of treatment for this patient.

1. Surgical (sequestrectomy).
2. Medical treatment.
3. Immunotherapy.
4. Physiotherapy.
5. All specified methods.

Correct answers to tasks: 1-2, 6-5.

### **ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON**

At the beginning of the lesson, the initial level of students' knowledge on test tasks is monitored. After the control of the initial knowledge and their correction, the lesson continues in the clinical hall (hospital department), where students take part (together with the teacher) in the reception or supervision of patients. During the curation of patients, attention is paid to the importance of the correct collection of anamnesis and the nature of the patient's complaints. Under the supervision of the teacher, the student conducts an examination of the patient, identifies the main symptoms of chronic osteomyelitis and prescribes additional examination methods. The teacher presents the data of the clinical examination of the patient, the students evaluate them, in particular, describe the X-ray picture of the disease, express an opinion about the diagnosis, make up a local treatment plan. The teacher performs the sequestrectomy operation, fixing the attention of students at each stage of it. After the operation, the students monitor the patient, assess his general condition and local changes, and make a plan for drug treatment. Students solve situational clinical problems.

At the end of the lesson, the final test control of the assimilation of the studied topic is summed up. The actions of students during the curation of patients are analyzed. The result is summed up. A task is given for the next lesson.

## TECHNOLOGICAL MAP OF THE PRACTICAL LESSON

| Stages of practical training                                                                                                                         | Time in min. | Equipment                                                                                                                                                                                               | Venue                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Checking the initial level of students' knowledge                                                                                                    | 20           | A set of test tasks to control the initial level of knowledge.                                                                                                                                          | Study room                        |
| Under the supervision of a teacher, students take part in the examination and admission of patients in a polyclinic (hospital, sanitary inspection). | 155          | A set for examination of patients.<br>Tables, slides, models, a set of radiographs, data from clinical and laboratory studies.<br>Situational tasks<br><br>Graph of the logical structure of the topic. | Polyclinic, hospital, study room. |
| Analysis and correction of the assimilation of the studied topic. Final test control.                                                                | 30           | Test tasks to control the assimilation of the topic                                                                                                                                                     | Study room                        |
| Summing up the lesson                                                                                                                                | 15           |                                                                                                                                                                                                         | Study room                        |

### Recommended literature:

#### Main:

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

#### Additional:

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.

3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007

4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

# GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC CHRONIC ODONTOGENIC OSTEOMYELITIS OF THE JAWS: ETIOLOGY, PATHOGENESIS, CLINIC, DIAGNOSIS, TREATMENT

## CLASSIFICATION

| DESTRUCTIVE                                                                                                                      | HYPERPLASTIC |
|----------------------------------------------------------------------------------------------------------------------------------|--------------|
| <ul style="list-style-type: none"> <li>- Focal</li> <li>-Limited</li> <li>-Diffuse: 1) creeping form<br/>2) nest form</li> </ul> |              |

## DIAGNOSTIC METHODS

| Clinical examination                                                                                                                              | Laboratory examination                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>1. Complaints</li> <li>2. Anamnesis of the disease</li> <li>3. Inspection</li> <li>4. Palpation</li> </ul> | <ul style="list-style-type: none"> <li>1. Clinical and biochemical examination of blood, urine, pus</li> <li>2. Radiography</li> <li>3. ULTRASOUND</li> <li>4. Biopsy</li> </ul> |

## CLINICAL MANIFESTATIONS

| Limited                                                                                                                                                                                                                                                                                                                                                                    | Focal                                                                                                                                                                                                                                                                                                                                                                                                                 | Diffuse                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Hyperplastic                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>1. Pain and mobility of one tooth</li> <li>2. Limited mouth opening</li> <li>3. The presence of single intraoral fistulas</li> <li>4. Thickening of the alveolar process</li> <li>5. Discharge of pus through the gingival margin</li> <li>6. The presence of fistulas by granulation and small sequestration in the pus</li> </ul> | <ul style="list-style-type: none"> <li>1. Pain and mobility of two teeth</li> <li>2. The presence of intraoral fistulas and single external</li> <li>3. Thickening of the alveolar process and body parts</li> <li>4. Discharge of pus through the gingival margin</li> <li>5. The presence of fistulas with granulations, pus and small sequestration in the pus</li> <li>6. Restriction of mouth opening</li> </ul> | <ul style="list-style-type: none"> <li>1. Pain and mobility of several teeth</li> <li>2. The presence of external multiple fistulas</li> <li>3. Thickening of a part of the jaw body, or the entire jaw</li> <li>4. Sensitivity disorder (Vincent's symptom)</li> <li>5. Mobility of fragments of the lower jaw, discharge of pus through the gingival margin</li> <li>6. The presence of fistulas with granulations and small sequestration in the pus</li> </ul> | <ul style="list-style-type: none"> <li>1. Thickening of the jaw</li> <li>2. The presence or absence of fistulas</li> <li>3. Tooth pain and mobility</li> <li>4. Restriction of mouth opening</li> </ul> |

## TREATMENT

| Surgical                                                                                                                                                 | Conservative                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>1. Removal of the causal tooth</li> <li>2. Filling of the tooth cavity with resection of the root tip.</li> </ul> | <ul style="list-style-type: none"> <li>1. Antibacterial</li> <li>2. Desensitizing</li> <li>3. General strengthening</li> </ul> |

|                                                                                 |                                                                                                 |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 3. Tooth replantation<br>4. Sequestrectomy<br>5. Elimination (opening) of leaks | 4. Immunocorrecting<br>5. Physiotherapy<br>6. Physical therapy. Mechanotherapy<br>7. Orthopedic |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|

### **TOPIC:**

## **ABSCESSSES AND PHLEGMONS OF CELLULAR SPACES ADJACENT TO THE UPPER JAW: CLINIC, DIAGNOSIS, TREATMENT**

### **RELEVANCE OF THE TOPIC**

Knowledge of the phlegmon clinic of cellular spaces adjacent to the upper jaw is necessary for the differential diagnosis of periostitis, osteomyelitis, facial phlebitis. During the lesson, it is necessary to draw the attention of students to such complications as sepsis, thrombophlebitis of the facial veins, thrombosis of the cavernous sinus, intracranial complications.

### **THE GENERAL PURPOSE OF THE LESSON**

Be able to recognize clinical signs, justify and draw up a plan for diagnostic examination and treatment of patients with phlegmon of cellular spaces adjacent to the upper jaw, prevent their complications.

### **TO REALIZE THE OVERALL GOAL OF THE LESSON, YOU NEED TO BE ABLE TO**

| Specific goals                                                                                                            | Goals of the initial level of knowledge                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Identify and interpret the main etiological factors of the development of abscesses and phlegmon of the face and neck. | 1. Interpret anatomical and topographic data of cellular spaces in the upper jaw, interpret the mechanism of development of acute inflammatory process in soft tissues (Department of Normal Anatomy, Department of Topographic Anatomy and Operative Surgery, Department of Pathological Physiology, Department of Pathological Anatomy). |
| 2. Recognize the main clinical symptoms of abscesses and phlegmon adjacent to the upper jaw.                              | 2. Interpret the data of anamnesis, complaints, local and general status of patients with inflammatory processes of soft tissues (Department of Propaedeutic therapy, Department of General Surgery, Department of Surgical Dentistry).                                                                                                    |
| 3. Draw up and justify a plan for the                                                                                     | 3. Interpret the data of clinical,                                                                                                                                                                                                                                                                                                         |

|                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| examination of patients with abscesses and phlegmon in the upper jaw, use the phlegmon classification for diagnosis.                                                                                                                                                                          | laboratory and radiological research methods in acute inflammatory processes (Department of Radiology, Department of Propaedeutic Therapy, Department of General Surgery, Department of Surgical Dentistry, Department of Microbiology). |
| 4. Draw up and justify a plan for surgical treatment of patients with phlegmon in the upper jaw, navigate surgical approaches used in the autopsy of phlegmon of this localization, draw up and justify a general treatment plan taking into account the severity of the patient's condition. | 4. Interpret the pharmacological characteristics of drugs used to treat purulent processes (Department of Pharmacology, Department of General Surgery, Department of Surgical Dentistry).                                                |

## **TASKS FOR SELF-CONTROL AND SELF-CORRECTION OF THE INITIAL LEVEL OF KNOWLEDGE**

### **Task 1.**

Specify the anatomical boundaries of the subcellular cellular space.

1. From above - the lower edge of the eye socket, inside - the side wall of the nose, from below - the alveolar process of the upper jaw, from outside - the cheekbone-jaw suture.
2. From above - the lower edge of the orbit, from the outside - the cheekbone-jaw suture, from below - the anterior-upper part of the buccal region, from behind - the cheekbone-temporal suture.
3. From above - the lower edge of the eye socket, from inside - the side wall of the nose, from below - the alveolar process of the upper jaw, from outside – the anterior edge of the masticatory muscle.
4. From above - the lower edge of the eye socket, from inside - the side wall of the nose, from below - the anterior part of the buccal region, from outside – the inner surface of the lower jaw branch.
5. From above - the lower edge of the eye socket, from inside - the side wall of the nose, from below - the alveolar process of the upper jaw, from outside – the zygomatic arch.

### **Task 2.**

Name the anatomical boundaries of the buccal region.

1. From above - the lower edge of the zygomatic bone; in front - the line connecting the zygomatic-jaw suture with the corner of the mouth; from below - the lower edge of the lower jaw; from behind - the anterior edge of the masticatory muscle.
2. From above - the lower ocular edge; in front - the line connecting the cheekbone-jaw seam with the corner of the mouth; from below - the lower edge of the lower jaw; from behind - the anterior edge of the masticatory muscle.
3. From above - the lower edge of the zygomatic bone; in front - the vestibule of the oral cavity; from below - the lower edge of the lower jaw; from behind – the anterior edge of the masticatory muscle.
4. From above - the lower edge of the zygomatic bone; in front - the vestibule of the oral cavity; from below - the lower edge of the lower jaw; from behind – the branch of the lower jaw.
5. From above - the lower edge of the zygomatic bone; in front - the vestibule of the oral cavity; from below the alveolar process of the lower jaw; from behind - the branch of the lower jaw.

#### Task 3.

Is there a relationship between the occurrence and features of the clinical course of acute odontogenic inflammatory processes with microbial sensitization of the patient?

1. No, not available.
2. Available, but in rare cases.
3. Available only in elderly patients.
4. Yes, there is.
5. Available only in weakened patients.

#### Task 4.

What is the percentage of rod-shaped neutrophils from the total number of leukocytes in the blood of healthy people?

1. 1-2%.
2. 2-5%
3. 5-18%
4. 10-20%
5. 25-30%

#### Task 5.

A sign of a favorable course of the wound process during cytological examination is:

1. The appearance of eosinophils.

2. The appearance of neutrophils.
3. The appearance of leukocytes.
4. The appearance of monocytes.
5. The appearance of plasma cells.

Task 6.

With detoxification therapy for purulent inflammatory diseases , enter:

1. First, solutions containing polyvinylpyrrolidone, and then glucose.
2. First, solutions containing polyvinylpyrrolidone, and then solutions containing dextran.
3. First solutions containing dextran, and then solutions containing polyvinylpyrrolidone.
4. First solutions containing dextran, and then glucose.
5. There is no difference in the sequence of administration of solutions.

Task 7.

Choose from the following drugs with high activity against bacteroids.

1. Penicillin.
2. Kanamycin.
3. Metronidazole.
4. Oletetrin.
5. Nystatin.

Correct answers to tasks: 1-1, 6-3.

If the student finds that he is not ready to solve one or more tasks, he must replenish his initial level of knowledge from the relevant sources of information.

After checking the initial level of knowledge, you can begin an in-depth study of this topic.

**TRAINING CONTENT:**

**THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO  
CARRY OUT TARGETED ACTIVITIES**

1. Etiology of abscesses and phlegmon of cellular spaces adjacent to the upper jaw.

2. Classification of abscesses and phlegmon of cellular spaces in the upper jaw.
  3. Abscesses and phlegmons of the superficial cellular spaces adjacent to the upper jaw: clinic, diagnostic methods, principles of surgical treatment.
  4. Abscesses and phlegmons of deep cellular spaces adjacent to the upper jaw: clinic, diagnostic methods, principles of surgical treatment.
  5. Principles of drug therapy of acute purulent inflammatory processes. Prevention of general and local complications with phlegmon of cellular spaces in the upper jaw.
- Relevant information will help you master these questions.

## **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION**

### **THE TOPIC UNDER STUDY**

#### **Task 1.**

Patient K., 30 years old, turned to a dental surgeon with complaints of facial asymmetry, pain in the right cheek, elevated body temperature up to 38 °C. When examining the patient, the doctor revealed a spilled, sharply painful infiltrate in the area of the right cheek with signs of fluctuation, the skin over the infiltrate is hyperemic, it is not taken into the fold. A destroyed 16 tooth was found in the oral cavity, the percussion of which is sharply painful. On the X-ray of the 16th tooth, the focus of bone tissue destruction is determined in the area of the tops of the buccal roots with fuzzy contours, up to 0.7 cm in size. Based on complaints, objective examination and data from an additional examination method, a diagnosis was made: phlegmon of the cheek on the right. What is the etiology of this phlegmon?

1. Odontogenic.
2. Stomatogenic.
3. Osteogenic.
4. Adenogenic.
5. Rhinogenic.

#### **Task 2.**

Patient N., 30 years old, opened odontogenic phlegmon of the cheek on the right. A smear of the discharge from the wound was taken, sent for bacteriological examination. Which groups of microbial flora are most likely to be isolated in this case?

1. Monocultures of aerobic gram-positive microorganisms.
2. Aerobic gram-negative microorganisms.
3. Anaerobic gram-negative microorganisms.
4. Anaerobic gram-positive microorganisms.
5. Mixed microflora.

### Task 3.

Patient B., 40 years old, turned to the clinic of maxillofacial surgery for acute purulent-inflammatory process in the right subglacial region. After the examination and examination, the diagnosis was made: odontogenic phlegmon of the subglacial region on the right. What are the main symptoms of phlegmon of this localization?

1. Infiltration in the subglacial region, coherence of the nasolabial fold, elevation of the nose wing, swelling of the lower and upper eyelids, the skin is hyperemic, it is not taken into the fold, there is no swelling of the mucous membrane along the transitional fold.
2. Limited, sharply painful infiltration in the suborbital region, absence of swelling of the mucous membrane along the transitional fold.
3. Spilled infiltrate in the subglacial area, the skin is hyperemic, does not take into the fold, the swelling of the mucous membrane along the transitional fold.
4. Spilled infiltrate in the subglacial area, the skin is hyperemic, is taken into a fold, swelling of the mucous membrane along the transitional fold, limited opening of the mouth.
5. Infiltration in the subglacial region, smoothness of the nasolabial fold, swelling of the lower and upper eyelids, the skin is hyperemic, it is not taken into the fold, the absence of swelling of the mucous membrane along the transitional fold, a sharp restriction of mouth opening.

### Task 4.

Patient K., 60 years old, was taken to the emergency department of the maxillofacial surgery clinic in a serious condition. After the examination and examination of the patient, the diagnosis was made: odontogenic phlegmon of the temporal region and the sub-temporal fossa on the right. After opening the phlegmon, the discharge from the focus of inflammation was sent for bacteriological examination. Prescribe the most rational combination of medications for the treatment of purulent-inflammatory processes.

1. Antibacterial substances, taking into account individual tolerance and taking into account the antibioticogram, anti-inflammatory drugs, detoxification drugs, immunostimulating substances, vitamins, diuretics.
2. Antibacterial substances, anti-putrefactive drugs, detoxifying drugs, immunostimulating substances, vitamins, diuretics.
3. Antibacterial agents, detoxification drugs, immunostimulating agents, vitamins, diuretics.
4. Antibacterial agents, taking into account individual tolerance and taking into account the antibioticogram, anti-putrefactive substances, immunostimulating substances, vitamins, diuretics.
5. Antibacterial substances, anti-putrefactive drugs, vitamins, immunostimulating drugs.

### Task 5.

Patient V., 65 years old, was taken to the maxillofacial surgery clinic in a serious condition with phlegmon of several cellular spaces in the upper jaw area on the left. The doctor decided to conduct preoperative drug therapy for the patient. Is preoperative drug therapy necessary for acute purulent-inflammatory processes, and, if necessary, what is it?

1. Necessary.
2. No need.
3. Necessary: antibiotics, taking into account individual tolerance and taking into account the antibioticogram, anti-putrefactive drugs.
4. It is necessary, taking into account hemodynamic parameters: substances normalizing blood pressure; detoxification therapy, anti-putrefaction drugs, diuretics.
5. Necessary, taking into account hemodynamic parameters: substances normalizing blood pressure, respiratory analgesics.

### Task 6.

In the emergency room, patient B., 40 years old, had a phlegmon of the right cheek opened. In the postoperative period, there was such a complication as paralysis of the branches of the facial nerve on the right. What mistake was made by the doctor when opening the phlegmon?

1. Wrong choice of approach when opening the phlegmon.
2. Insufficient incision length.
3. Deep incision.
4. Soft tissue rupture.
5. The direction of the incision was chosen without taking into account the topography of the facial nerve.

Correct answers to tasks: 1-1, 6-5.

## **ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON**

At the beginning of the lesson, the initial level of students' knowledge on test tasks is monitored.

After the control of the initial knowledge and their correction, the lesson continues in the clinical hall (hospital department, sanpropusnik), where students take part (together with the teacher) in the reception or supervision of patients. During the curation of patients, attention is paid to the importance of the correct collection of anamnesis and the nature of patients' complaints. Under the supervision of a teacher, students conduct an examination of the patient, identify the main symptoms and prescribe additional methods of examination. The teacher presents the data of the clinical examination of the patient, the students evaluate them, in particular, describe

the X-ray picture of the disease. They note the importance of this study, then express an opinion on the diagnosis, make up a local treatment plan. The teacher performs the operation of opening an abscess or phlegmon, fixing the attention of students at each stage of the operation. After the operation, the students monitor the patient, assess his general condition and local changes, and make a plan for drug treatment. Students solve problems in connection with the clinical situation.

At the end of the lesson, the final test control of the assimilation of the studied topic is summed up. The actions of students during the curation of patients are analyzed. The result is summed up. A task is given for the next lesson.

### **TECHNOLOGICAL MAP OF THE PRACTICAL LESSON**

| Stages of practical training                                                                                | Time in min. | Equipment                                                                                                                                               | Venue                                                  |
|-------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Checking the initial level of students' knowledge                                                           | 20           | A set of test tasks to control the initial level of knowledge.                                                                                          | Study room                                             |
| Under the supervision of a teacher, examination of patients in a polyclinic, hospital, sanitary inspection. | 155          | A set for examination of patients. Tables, slides, models, a set of radiographs, situational tasks.<br><br>Graph of the logical structure of the topic. | Polyclinic, hospital, sanitary inspection, study room. |
| Analysis and correction of the assimilation of the studied topic. Final test control.                       | 30           | Test tasks to control the assimilation of the topic                                                                                                     | Study room.                                            |
| Summing up the lesson.                                                                                      | 15           |                                                                                                                                                         | Study room.                                            |

#### **Recommended literature:**

##### **Main:**

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

##### **Additional:**

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.
3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007
4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

**GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC: ABSCESSES AND PHLEGMONS OF CELLULAR SPACES ADJACENT TO THE UPPER JAW: CLINIC, DIAGNOSIS, TREATMENT**

**ABSCESSES AND PHLEGMONS IN THE UPPER JAW AREA**

**CLASSIFICATION**

| ABSCESSSES                                                                                           | PHLEGMONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>- Palate, eyelids, lips, peritonsillar, dog fossa.</li> </ul> | <ol style="list-style-type: none"> <li>1) Odontogenic: causal tooth.</li> <li>2) Adenophlegmon: acute lymphadenitis.</li> <li>3) Osteophlegmons: periostitis, osteomyelitis, difficult eruption of the wisdom tooth.</li> <li>4) Stomatogenic: periodontal mucosal tissue disease</li> <li>5) Salivatory: sialodochitis sialoadenitis</li> <li>6) Tonsillar-Pharyngeal; Rhinogenic; Otogenic: diseases of ENT organs on the background of sensitization, weakening of immunological properties, disorders of the function of the central nervous system and peripheral nervous system</li> </ol> |

**CLINIC**

| THE FOCUS OF INFLAMMATION                                                                                                                                                                                     | IN ORGANS AND TISSUES                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>- Spontaneous pain</li> <li>- Hyperemia</li> <li>- Infiltration</li> <li>- Inflammatory contracture</li> <li>- Violation of the function of chewing, speech</li> </ul> | <ul style="list-style-type: none"> <li>- Weakness, sweating, chills</li> <li>- Temperature rise</li> <li>- Leukocytosis, acceleration of ESR</li> <li>- Increased blood clotting</li> <li>- Changes from the CCC, liver, kidneys, intestines</li> </ul> |

**COMPLICATIONS**

- Sepsis
- Phlebitis and thrombophlebitis of facial veins, eye sockets
- Encephalitis,
- Meningitis,
- Cavernous sinus thrombosis

#### DIFFERENTIAL DIAGNOSIS

1. Localization of infiltration.
2. Disorder of the function of breathing, chewing, vision.
3. Degrees of hyperemia of the skin, mucosa.

#### TREATMENT

| Surgical                                                                                                                                                     | Conservative                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>- Removal of the causal tooth</li> <li>- Autopsy of phlegmon, abscess</li> <li>- Active drainage of wounds</li> </ul> | <ul style="list-style-type: none"> <li>- Antibacterial</li> <li>- Desensitizing</li> <li>- Detoxifying, restorative</li> <li>- Physiotherapy, physical therapy</li> </ul> |

#### PREVENTION

Early accessibility, timely diagnosis, rational treatment, compliance with san.-gig. measures, sanitation of the oral cavity, san.-lumen. work among the population.

#### TOPIC:

### **ABSCESSSES AND PHLEGMONS OF CELLULAR SPACES ADJACENT TO THE LOWER JAW: CLINIC, DIAGNOSIS, TREATMENT.**

#### **RELEVANCE OF THE TOPIC**

Knowledge of the phlegmon clinic of the cellular spaces adjacent to the lower jaw is necessary for the differential diagnosis of periostitis, osteomyelitis, facial phlebitis. During the lesson, it is necessary to draw the attention of students to the formidable complications: sepsis, neck phlegmon, mediastinitis.

#### **THE GENERAL PURPOSE OF THE LESSON.**

Be able to recognize clinical signs, justify and draw up a plan for diagnostic examination and treatment of patients with phlegmon in the lower jaw, prevent their complications.

#### **TO REALIZE THE OVERALL GOAL OF THE LESSON, YOU NEED TO BE ABLE TO**

| Specific goals                                                                                                                                                                  | Goals of the initial level of knowledge                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. To recognize general and local manifestations of phlegmon in the lower jaw area, taking into account the localization of the purulent process.                               | 1. Interpret anatomical and topographic data of cellular spaces in the lower jaw area (Department of Normal Anatomy, Department of Topographic Anatomy and Operative Surgery).                                                                           |
| 2. Draw up and justify a plan for the examination of patients with phlegmon in the lower jaw.                                                                                   | 2. Interpret the data of complaints, anamnesis, local and general status of a patient with diseases of inflammatory genesis (Department of Propaedeutics of Internal Diseases, Department of General Surgery, Department of Surgical Dentistry).         |
| 3. To carry out a differential diagnosis of the phlegmon of the lower jaw by localization, taking into account the classification.                                              | 3. To interpret the mechanism of development of acute inflammatory process in soft tissues (Department of Pathological Physiology, Department of Pathological Anatomy).                                                                                  |
| 4. Draw up and justify a plan for the local treatment of patients with phlegmon in the lower jaw area; navigate surgical approaches when opening phlegmon of this localization. | 4. Interpret the data of clinical laboratory and radiological research methods (Department of Propaedeutics of Internal Diseases, Department of General Surgery, Department of Radiology, Department of Microbiology, Department of Surgical Dentistry). |
| 5. Draw up and justify a plan for the general treatment and prevention of complications in patients with phlegmon in the lower jaw.                                             | 5. Interpret the pharmacological characteristics of drugs used to treat purulent processes (Department of Pharmacology, Department of General Surgery, Department of Surgical Dentistry)                                                                 |

## **TASKS FOR SELF-CONTROL AND SELF-CORRECTION OF THE INITIAL LEVEL OF KNOWLEDGE**

### **Task 1.**

What anatomical formations limit the cellular space of the submandibular triangle?

1. Outside - the inner surface of the lower jaw body.
2. Front and back - anterior and posterior abdomen of the bicuspid muscle.
3. On top - a deep leaf of the neck's own fascia.
4. From below - the surface leaf of the neck's own fascia.

5. All of the above.

Task 2.

What is a pyogenic membrane?

1. The middle layer of the abscess, separating it from soft tissues.
2. The outer layer of the abscess, separating it from the soft tissues.
3. The inner layer of the abscess, limiting the purulent-necrotic process and producing exudate.
4. The inner layer of the abscess, limiting the purulent-necrotic process and not producing exudate.
5. The middle layer of the abscess, separating it from the bone.

Task 3.

Which muscles divide the perianal space into anterior and posterior?

1. The stylo-lingual and posterior abdomen of the bicuspid muscle.
2. The shiloharyngeal and shiloh-lingual muscles.
3. The shilopodylingual and shiloharyngeal muscles.
4. The shiloh-lingual and shiloh-lingual muscles.
5. The shiloh-pharyngeal, shiloh-lingual and shiloh-lingual muscle.

Task 4.

What form of inflammation prevails in phlegmonous processes in soft tissues?

1. Exudative-serous.
2. Exudative fibrinous.
3. Exudative hemorrhagic.
4. Exudative-putrefactive.
5. Exudative-purulent.

Task 5.

Which drug has a high activity of action against non-pathogenic anaerobes?

1. Oleandomycin.
2. Lincomycin.
3. Metronidazole.
4. Kanamycin.
5. Penicillin.

Correct answers to tasks: 1-5; 4-5.

If the student finds that he is not ready to solve one or more tasks, he must replenish his initial level of knowledge from the relevant sources of information. After checking the initial level of knowledge, you can begin an in-depth study of the topic.

## **TRAINING CONTENT:**

### **THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO CARRY OUT TARGETED ACTIVITIES**

1. Etiology and pathogenesis of abscesses and phlegmon adjacent to the lower jaw.
2. General and local signs of phlegmon adjacent to the lower jaw (chin region, submandibular triangle, buccal region, submasseterial space, pterygoid-maxillary space, near-pharyngeal space).
3. Principles and methods of examination of patients with phlegmon in the lower jaw.
4. Surgical methods of treatment of phlegmon of the lower jaw.
5. Principles of drug therapy for phlegmon adjacent to the lower jaw, prevention of general and local complications.

Relevant information will help you master these questions.

## **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION**

### **THE TOPIC UNDER STUDY**

#### **Task 1.**

The main source of odontogenic infection with phlegmon of the cheeks are:

1. Incisors, canines and premolars of the upper jaw.
2. Premolars and molars of the upper and lower jaws.
3. Incisors, canines and premolars of the lower jaw.
4. Molars of the upper jaw.
5. Molars of the lower jaw.

#### **Task 2.**

Patient G., 28 years old, turned to a dental surgeon with complaints of pain and swelling in the submandibular region on the left. On examination: in the submandibular triangle on the left, a spilled painful infiltrate is determined, the mouth opening is up to 4.0 cm between the central teeth, the crown of the 36 tooth is destroyed by 2/3, percussion is sharply painful, the mucous membrane around the tooth is swollen, hyperemic, 35 and 37 teeth are affected by caries, 38 tooth is semi-laminated, the hood over the distal bumps is not inflamed. The radiograph shows the expansion of the periodontal gap at the 36th tooth. The diagnosis was made: odontogenic phlegmon of the submandibular triangle on the left. What is the cause of this phlegmon?

1. The presence of a tooth affected by caries 35.
2. The presence of a tooth affected by caries 37.
3. The presence of a semi-refined 38 tooth.
4. The presence of a hood over the 38 tooth.
5. The presence of an inflammatory process in the area of the 36th tooth.

#### Task 3.

Patient N., 45 years old, was taken to the clinical rest with complaints of pain and swelling in the subcutaneous region. On examination: there is a dense, diffuse, painful infiltrate reaching the hyoid bone in the subcutaneous area. The skin above it is hyperemic, edematous, painful on palpation. The mouth opens up to 4.5 cm between the central teeth. The crown of 32 teeth is destroyed by 2/3, percussion is sharply painful, and 33 and 31 teeth are affected by caries, 36 and 37 teeth are under fillings. The mucous membrane in the area of the sublingual and lingual grooves is not changed. Radiologically - the expansion of the periodontal gap in the area of 32 teeth. The diagnosis was made: odontogenic phlegmon of the subcutaneous region. What clinical factors confirm this diagnosis?

1. The presence of caries of 33 and 31 teeth.
2. The presence of sealed 36 and 37 teeth.
3. The presence of infiltrate in the subcutaneous area.
4. The presence of periodontitis in 32 teeth.
5. The presence of infiltrate and periodontitis in 32 teeth.

#### Task 4.

Patient 3., 48 years old, was taken to the emergency room with a temperature of 39 ° C. The disease began with pain in the destroyed 47 tooth, then the mouth closed, painful swallowing and hoarseness of voice appeared. On examination, a slight swelling is determined in the area of the angle of the lower jaw on the right. With deep palpation to the inner surface of the angle of the jaw, sharp soreness and infiltration of tissues. The mouth opens up to 1.0 cm between the central teeth. 47 tooth – the crown is destroyed by 2/3, percussion is painful. The mucous membrane around the tooth, in the area of the soft palate, along the pterygoid-maxillary fold and the side wall of the pharynx on the right, which protrudes to the left, is hyperemic, edematous, painful, the tongue of the soft palate is shifted to the left. Make a diagnosis based on the listed clinical data?

1. Odontogenic superficial phlegmon of the pterygoid-maxillary space with a mild course.
2. Odontogenic deep phlegmon of the near-pharyngeal space with an average degree of severity of the flow.
3. Non-odontogenic superficial phlegmon of the pterygoid-maxillary space with a light flow.

4. Odontogenic superficial phlegmon of the pterygoid-maxillary and near-pharyngeal spaces with a light flow.
5. Odontogenic deep phlegmon of the pterygoid-maxillary and near-pharyngeal spaces with an average severity of flow.

Task 5.

Patient Yu., 49 years old, was taken to the dental clinic with complaints of an increase in body temperature to 39 ° C, throbbing pains in the left cheek area. The disease began with pain in the destroyed 36 tooth. Objectively: facial asymmetry due to the presence of a dense painful infiltrate in the left buccal region. The mucous membrane of the left cheek is also infiltrated, with a transition to a transitional fold at the level of 35 and 37 teeth. The crown of the 36th tooth is destroyed by 2/3. Percussion is painful. When puncturing the infiltrate of the left cheek, pus was obtained. Radiologically - expansion of the periodontal gap of the 36th tooth. The diagnosis was made: odontogenic phlegmon of the buccal region on the left. What are the principles of surgical treatment of phlegmon in this patient?

1. Removal of 36 teeth.
2. Opening the infiltrate with external access throughout its entire length, taking into account the location of the branches of the facial nerve.
3. Opening of the infiltrate with intraoral access throughout its entire length along the line of teeth closure.
4. Removal of 36 teeth and opening of the infiltrate by external access.
5. Removal of the 36th tooth, opening of the infiltrate with external and intraoral access throughout its entire length.

Task 6.

Patient D., 55 years old, was taken to a dental clinic with complaints of general weakness, an increase in body temperature to 40 ° C, swelling in the lower jaw area on the left. For seven days, 37 teeth hurt. Objectively: facial asymmetry due to swelling in the lower jaw area on the left, painful infiltration in the area of the masticatory muscle. When palpating the inner surface of the angle of the lower jaw, there is sharp soreness. The mouth opens up to 0.5-0.7 cm between the central teeth. The crown of the 37th tooth is destroyed by 2/3, percussion is painful. The mucous membrane of the alveolar process, transitional fold, pterygoid-maxillary fold and soft palate is hyperemic, edematous, the tongue is shifted to the right. The side wall of the pharynx protrudes to the right, and its mucosa is hyperemic, edematous. Odontogenic phlegmon of the submasseterial, pterygoid-maxillary and near-pharyngeal spaces on the left was diagnosed. By what access (through which incision) can all three of these spaces be adequately opened?

1. Intraoral - incision along the pterygoid-maxillary fold.
2. External - horizontal incision in the subcutaneous area.
3. External - an incision parallel to the posterior edge of the jaw branch.

4. Intraoral - incision along the transitional fold.

5. External - an incision in the submandibular triangle, bordering the angle of the jaw, retreating from the edge of the bone by 2.0 cm.

Task 7.

Patient S., 52 years old, was taken to the emergency room in a serious condition. After the examination, the doctor diagnosed: odontogenic phlegmon of the submandibular triangle, pterygoid-maxillary and near-pharyngeal spaces on the left. The patient underwent an autopsy of the phlegmon. Prescribe adequate drug therapy.

1. Antibacterial therapy, taking into account the sensitivity of microflora, and antifungal drugs (nystatin, levorin).

2. Detoxification therapy (hemodesis, neohemodesis, sodium bicarbonate, polyglucine, glucose) with forced diuresis.

3. Desensitizing (diphenhydramine, calcium chloride, prednisolone) and restorative drugs (vitamins, tincture of Chinese lemongrass).

4. Immunotherapy (antistaphylococcal toxoid, bacteriophage, immunophane) with nonspecific stimulants (prodigiosan, methyluracil).

5. All of the above.

Task 8.

Patient S., 49 years old, was taken to the emergency room in a serious condition. After the examination, the doctor diagnosed odontogenic phlegmon of the cheek. The doctor opened the phlegmon with external access - a vertical incision up to 1 cm long through all tissues to the mucous membrane of the cheek. In the postoperative period, there was a complication - paralysis of the facial nerve branches. What is the main mistake of the doctor led to such a complication?

1. Incorrect choice of access for opening the phlegmon.

2. Insufficient incision length.

3. Large incision depth.

4. Insufficient length and large depth of incision.

5. Wrong direction of the incision.

Correct answers to tasks: 2-5, 8-5.

## **ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON**

At the beginning of the lesson, the initial level of students' knowledge on test tasks is monitored.

After control of the initial knowledge and their correction, the lesson continues in the clinical hall (hospital department, sanpropusnik), where students take part (together with the teacher) in the reception or supervision of patients. During the curation of patients, attention is paid to the importance of the correct collection of anamnesis and

the nature of the patient's complaints. Under the supervision of a teacher, students conduct an examination of the patient, identify the main symptoms and prescribe additional methods of examination. The teacher presents the data of the clinical examination of the patient, the students evaluate them, in particular, describe the X-ray picture of the disease. Note the importance of this study, then express an opinion about the diagnosis. Make a local treatment plan. The teacher performs an operation - opening an abscess (phlegmon), fixing the attention of students at each stage. After the operation, students monitor the patient, assess his general condition and local changes. They make up a medical treatment plan. Students solve problems in connection with the clinical situation.

At the end of the lesson, the final test control of the assimilation of the studied topic is summed up. The actions of students during the curation of patients are analyzed. The result is summed up. A task is given for the next lesson.

### **TECHNOLOGICAL MAP OF THE PRACTICAL LESSON**

| Stages of practical training                                                                                                                            | Time in min. | Equipment                                                                                                                                        | Venue                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Checking the initial level of students' knowledge                                                                                                       | 20           | A set of test tasks to control the initial level of knowledge                                                                                    | Study room                                             |
| Under the supervision of a teacher, examination of patients in a polyclinic, hospital, sanitary inspection, participation in the reception of patients. | 155          | A set for examination of patients. Tables, slides, models, a set of radiographs. Situational tasks. Graph of the logical structure of the topic. | Polyclinic, hospital, sanitary inspection, study room. |
| Analysis and correction of the assimilation of the studied topic. Final test control.                                                                   | 30           | Test tasks to control the assimilation of the topic                                                                                              | Study room                                             |
| Summing up the lesson                                                                                                                                   | 15           |                                                                                                                                                  | Study room                                             |

**Recommended literature:**

Main:

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

Additional:

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.
3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007
4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

**GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC**  
**ABSCESSSES AND PHLEGMONS OF SPACES ADJACENT TO THE LOWER**  
**JAW: CLINIC, DIAGNOSIS, TREATMENT**

Classification

| ABSCESSSES                                                                                                      | OSTEOPHLEGMON                                                                                                                | ADENOPHLEGMON                                                                        |
|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 1. Maxillofacial groove<br>2. Submandibular<br>3. Sub-chin<br>4. Parotid<br>5. Buccal<br>6. Behind the jaw area | 1. Under the chewing gum<br>2. Pterygoid-maxillary<br>3. Submandibular<br>4. Sub-chin<br>5. Buccal<br>6. Post-maxillary area | 1. Submandibular<br>2. Sub-chin<br>3. Buccal<br>4. Parotid<br>5. Post-maxillary area |

ETIOLOGY AND PATHOGENESIS

| Odontogenic                                                                                                                                | Non - ontogenic                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 1. Periodontitis<br>2. Periostitis<br>3. Osteomyelitis<br>4. Suppurated cysts<br>5. Difficult eruption of wisdom teeth<br>6. Periodontitis | 1. Otogenic<br>2. Mucostomatogenic<br>3. Dermatogenic<br>4. Salivatory<br>5. Traumatic<br>6. Post-injection |

DIAGNOSTIC METHODS

| Clinical examination                         | Laboratory examination                                                                       |
|----------------------------------------------|----------------------------------------------------------------------------------------------|
| 1. Complaints<br>2. Anamnesis of the disease | 1. Biochemical, clinical, bacteriological examination of blood, urine, pus<br>2. Radiography |

|               |               |
|---------------|---------------|
| 3. Inspection | 3. ULTRASOUND |
| 4. Palpation  | 4. Puncture   |
|               | 5. Biopsy     |

### CLINICAL MANIFESTATIONS

| The focus of inflammation                                                                                                                                                                                                   | In systems and organs                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Spontaneous pain<br>2. Edema, hyperemia of the skin, mucous membrane<br>3. Painful infiltration<br>4. Abscess<br>5. Inflammatory contracture of the masticatory muscles<br>6. Violation of swallowing, speech, breathing | 1. Fever, chills, sweating, headache, weakness<br>2. Leukocytosis, accelerated ESR<br>3. Increased blood clotting<br>4. Changes from the cardiovascular system, excretory organs |

### Treatment

| Surgical                                                                                           | Conservative                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Removal of the causal tooth<br>2. Opening of an abscess or phlegmon<br>3. Active wound drainage | 1. Antibacterial<br>2. Desensitizing<br>3. Detoxification<br>4. General strengthening<br>5. Immunocorrecting<br>6. Physiotherapy<br>7. PHYSICAL therapy<br>8. Mechanotherapy |

### Topic:

**ABSCESSSES AND PHLEGMONS OF THE TONGUE, THE BOTTOM OF THE ORAL CAVITY, PUTREFACTIVE-NECROTIC PHLEGMON OF THE BOTTOM OF THE ORAL CAVITY (ANGINA OF ZHENSUL-LUDWIG)**

### RELEVANCE OF THE TOPIC

Abscesses and phlegmons of the tongue, the bottom of the oral cavity and putrefactive-necrotic phlegmon of the bottom of the oral cavity (angina Ginsula-

Ludwig) develop in a complex topographic area close to the larynx, pharynx and mediastinum. The clinical course of phlegmon is severe and can lead to such formidable complications as asphyxia, mediastinitis, sepsis. The ability to timely and correctly diagnose these phlegmon, make a plan for examination and treatment will prevent their formidable complications and save the patient's life.

### **THE GENERAL PURPOSE OF THE LESSON**

Be able to recognize the clinical manifestations of abscesses and phlegmon of the tongue, the bottom of the oral cavity and putrefactive-necrotic phlegmon of the bottom of the oral cavity (angina of Zhensul-Ludwig), make a plan for examination and treatment of the patient, prevent complications of a general and local nature.

### **TO REALIZE THE OVERALL GOAL OF THE LESSON, YOU NEED TO BE ABLE TO**

| Specific goals                                                                                                                                                                                                                                                                                                                                                                      | Goals of the initial level of knowledge                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. To recognize general and local manifestations of phlegmon in the lower jaw area, taking into account the localization of the purulent process.                                                                                                                                                                                                                                   | 1. Apply knowledge of anatomy and topographic anatomy of cellular spaces in the area of the tongue, the bottom of the mouth and neck (Department of Normal Anatomy, Department of Topographic Anatomy).                                                                       |
| 2. To recognize the clinical symptoms of abscess and phlegmon of the tongue, the bottom of the oral cavity, putrefactive-necrotic phlegmon of the maxillofacial region.                                                                                                                                                                                                             | 2. Evaluate and interpret the data obtained during the collection of complaints, anamnesis and assessment of the general condition of the patient (Department of Propaedeutic Therapy, Department of General Surgery, Department of Surgical Dentistry).                      |
| 3. Draw up and justify a plan of examination of a patient with abscess and phlegmon of the tongue, the bottom of the oral cavity, putrefactive-necrotic phlegmon of the bottom of the oral cavity.                                                                                                                                                                                  | 3. To interpret the bacteriological aspects of purulent and putrefactive processes (Department of Microbiology).                                                                                                                                                              |
| 4. To draw up and justify a plan for local treatment of a patient with abscess and phlegmon of the tongue, the bottom of the oral cavity, putrefactive-necrotic phlegmon of the bottom of the oral cavity; to navigate surgical approaches when opening the phlegmon of the tongue, the bottom of the oral cavity, putrefactive-necrotic phlegmon of the bottom of the oral cavity. | 4. Interpret the data of clinical laboratory and radiological research methods (Department of Microbiology, Department of Radiology with a course of radiation Anatomy, Department of Propaedeutic Therapy, Department of General Surgery, Department of Surgical Dentistry). |

|                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5. Draw up and justify a plan for the general treatment and prevention of complications in a patient with abscess and phlegmon of the tongue, the bottom of the oral cavity, putrefactive-necrotic phlegmon of the bottom of the oral cavity. | 5. Interpret the pharmacological characteristics of drugs used in the treatment of purulent and putrefactive-necrotic inflammatory processes (Department of Pharmacology, Department of Pathological Physiology, Department of Surgical Dentistry). |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## **TASKS FOR SELF-CONTROL AND SELF-CORRECTION**

### **THE INITIAL LEVEL OF KNOWLEDGE**

Task 1. What muscles underlie the diaphragm of the bottom of the oral cavity?

1. Sublingual muscles.
2. Maxillofacial muscles.
3. Chin-hyoid muscles.
4. Biconvex muscles.
5. Chin-lingual muscles

Task 2. How could the infection spread from 44 teeth to the root of the tongue?

1. Through the cellulose of the pterygoid-maxillary space.
2. Through the fiber of the submandibular triangle.
3. Through the fiber of the maxillofacial groove or sublingual area.
4. Through the fiber of the subcutaneous triangle.
5. Through the fiber of the near-pharyngeal space.

Task 3. What clinical signs are characteristic of phlegmon?

1. The general condition is not disturbed, slow onset, body temperature is subfebrile, locally diffuse or limited infiltration.
2. General condition is not disturbed, sudden onset, body temperature is subfebrile, pulse is rhythmic, satisfactory properties, locally diffuse or limited infiltration.
3. The general condition is significantly disturbed, sudden onset, body temperature is high, pulse is frequent, weak filling, there is no tendency to limit the process.
4. The general condition is not disturbed, slow start, body temperature is high, pulse is frequent, weak filling, there is no tendency to limit the process.
5. The general condition is slightly disturbed, sudden onset, subfebrile body temperature, locally limited infiltration.

Task 4.

The appearance of which cells is, according to cytological data, a sign of a favorable course of the wound process?

1. Neutrophils.

2. Eosinophils.
3. Plasma cells.
4. Monocytes.
5. Giant multinucleated cells.

Task 5. What change in the picture of white blood is characteristic of an acute inflammatory process?

1. Lymphocytosis.
2. Monocytopenia.
3. Eosinophilopenia.
4. Neutrophilic shift to the left.
5. Neutrophilic shift to the right.

Task 6.

Which of the listed antibacterial drugs has a high activity of action against non-pathogenic anaerobes?

1. Nystatin.
2. Metronidazole (trichopol).
3. Erythromycin.
4. Lincomycin.
5. Oleandomycin.

Correct answers to tasks: 3-3, 5-4.

If the student finds that he is not ready to solve one or more tasks, he must replenish his initial level of knowledge from the relevant sources of information.

After checking the initial level of knowledge, you can begin an in-depth study of this topic.

## **TRAINING CONTENT:**

### **THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO CARRY OUT TARGETED ACTIVITIES**

1. Etiology and pathogenesis of abscess and phlegmon of the tongue, the bottom of the oral cavity, putrefactive-necrotic phlegmon of the bottom of the oral cavity (angina of Zhensul-Ludwig).
2. Abscesses and phlegmons of the tongue: clinic, diagnostic methods, principles of treatment and prevention.
3. Phlegmon of the bottom of the oral cavity: clinic, diagnostic methods, principles of treatment and prevention.

4. Putrefactive-necrotic phlegmon of the bottom of the oral cavity (angina of Zhensul-Ludwig): clinic, diagnostic methods, principles of treatment and prevention.
5. Complications of abscess and phlegmon of the tongue, phlegmon of the bottom of the oral cavity, putrefactive-necrotic phlegmon of the bottom of the oral cavity, principles of treatment and prevention.

Relevant information will help you master these questions.

## **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION**

### **THE TOPIC UNDER STUDY**

#### **Task 1.**

Patient N., 60 years old, was hospitalized in the maxillofacial department with a diagnosis of Putrefactive necrotic phlegmon of the bottom of the oral cavity (angina of Zhensul-Ludwig). As a result of the action of which microflora does this phlegmon develop?

1. Mixed aerobic microflora.
2. Anaerobic microflora.
3. Streptococci.
4. Staphylococcus aureus.
5. All of the above.

#### **Task 2.**

After the examination, patient N., 46 years old, was diagnosed with Phlegmon of the root of the tongue. The patient was hospitalized in the maxillofacial department. Which operative access is optimal for opening the phlegmon of the root of the tongue?

1. Intraoral access.
2. Collar-shaped incision in the submandibular and submandibular triangles.
3. Vertical incision along the midline of the neck.
4. Incision in the submandibular triangle.
5. The incision bordering the corner of the lower jaw.

#### **Task 3.**

Patient R., 58 years old, was hospitalized in the maxillofacial department with a diagnosis of Odontogenic phlegmon of the bottom of the oral cavity. An emergency operation was performed – an autopsy of the phlegmon. Choose the optimal amount of complex drug therapy.

1. Antibacterial, detoxification therapy, symptomatic treatment.
2. Antibacterial, detoxification, restorative therapy, vitamin therapy.
3. Detoxification therapy, vitamin therapy, symptomatic treatment.

4. Antibacterial, restorative therapy, vitamin therapy, symptomatic treatment.
5. Antibacterial, detoxification, restorative therapy, vitamin therapy, symptomatic treatment.

#### Task 4.

Patient L., 50 years old, was admitted to the maxillofacial department with complaints of pain when swallowing, speaking, tongue movement, difficulty breathing, bad breath. Ill for 3 days, the disease is associated with the treatment and removal of 47 teeth. Objectively: the patient is excited, there is jaundice of the skin and sub-ictericity of the sclera, the skin is covered with sticky sweat, the patient is sluggish. Blood pressure 100/60 mmHg, pulse 130 beats. in min., weak filling, temperature 40.1 °C. Heart tones are muted, BDD 32 per minute, breathing is noisy. The mouth opens limited - up to 1.5 cm between the central incisors, the sublingual rollers are enlarged: covered with necrotic plaque. There is a putrid smell from the mouth. The lower part of the face is elongated due to the spread of painful dense infiltration between the lower edge of the lower jaw and the hyoid bone. The skin is hot, the color is not changed, the crease is going badly, crepitation is determined. In a clinical blood test – anemia, acute leukocytosis, ESR – 60 mm / hour. Make a preliminary diagnosis.

1. Phlegmon of the bottom of the oral cavity.
2. Phlegmon of the root of the tongue.
3. Phlegmon of the submandibular and submandibular triangle on the right.
4. Putrefactive-necrotic phlegmon of the bottom of the oral cavity (angina of Zhensul-Ludwig).
5. Phlegmon of the tongue and the bottom of the oral cavity.

#### Task 5.

Patient Zh., 63 years old, was admitted to the maxillofacial department with a diagnosis of Putrefactive-necrotic phlegmon of the bottom of the oral cavity (angina of Zhensul-Ludwig), an operation was performed - an autopsy of the phlegmon, complex drug therapy was prescribed. What data, first of all, speak about the putrefactive-necrotic form of the phlegmon flow?

1. Delayed wound cleansing.
2. Delayed regeneration in the wound.
3. Rapid growth of granulation tissue.
4. The presence of an ichorous odor in the wound and a scanty bloody effusion.
5. The presence of abundant purulent discharge in the wound.

#### Task 6.

Patient K., 43 years old, turned to the maxillofacial department with complaints of severe pain in the tongue, impaired swallowing, breathing, speech, limited mobility of the tongue, bad breath. After the examination, the diagnosis was made: Phlegmon

of the root of the tongue and the bottom of the oral cavity. During the preoperative preparation for emergency surgery (autopsy of the phlegmon), the patient's breathing deteriorated sharply and it became absolutely impossible to lie down. The development of a complication – asphyxia was diagnosed. Choose further treatment tactics.

1. Dissection of phlegmon, appointment of corticosteroid drugs in complex drug therapy.
2. Dissection of the phlegmon, the imposition of a tracheostomy.
3. The imposition of a tracheostomy, opening the phlegmon.
4. The imposition of a tracheostomy, the appointment of corticosteroid drugs in complex drug therapy.
5. The imposition of a tracheostomy, the opening of a phlegmon, the appointment of corticosteroid drugs in complex drug therapy.

Correct answers to tasks: 2-3, 3-5.

## **ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON**

At the beginning of the lesson, the initial level of students' knowledge on theoretical issues and test tasks is monitored.

After summing up the results of the control of the initial knowledge and their correction, classes continue to the hospital department, where, under the supervision of a teacher, students conduct curation of patients. During the curation of patients, attention is paid to the importance of the correct collection of complaints and anamnesis, assessment of the general condition and local status of a patient with abscesses and phlegmon of the tongue, the bottom of the oral cavity, putrefactive necrotic phlegmon of the bottom of the oral cavity, the importance of clinical laboratory and radiological studies in the diagnosis and evaluation of treatment results. Students take part in therapeutic and diagnostic manipulations. In the operating room and dressing room, attention is paid to possible accesses for opening abscesses and phlegmon of the specified localization, the phase of the wound process, the features of drug therapy. Students solve clinical situational tasks on the topic of the lesson.

At the end of the lesson, the final test control of the assimilation of the studied topic is summed up. The actions of students during the curation of patients are analyzed. The result is summed up. A task is given for the next lesson.

## **TECHNOLOGICAL MAP OF THE PRACTICAL LESSON**

| Stages of practical training  | Time in min. | Equipment                          | Venue      |
|-------------------------------|--------------|------------------------------------|------------|
| Checking the initial level of | 20           | A set of test tasks to control the | Study room |

| students' knowledge                                                                                                                                     |     | initial level of knowledge                                                                                                                       |                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Under the supervision of a teacher, examination of patients in a polyclinic, hospital, sanitary inspection, participation in the reception of patients. | 155 | A set for examination of patients. Tables, slides, models, a set of radiographs. Situational tasks. Graph of the logical structure of the topic. | Polyclinic, hospital, sanitary inspection, study room. |
| Analysis and correction of the assimilation of the studied topic. Final test control.                                                                   | 30  | Test tasks to control the assimilation of the topic                                                                                              | Study room                                             |
| Summing up the lesson                                                                                                                                   | 15  |                                                                                                                                                  | Study room                                             |

### **Recommended literature:**

#### **Main:**

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

#### **Additional:**

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.
3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007
4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

## **GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC SECTION ABSCESSSES AND PHLEGMONS OF THE BOTTOM OF THE ORAL CAVITY, PUTREFACTIVE-**

## NECROTIC PHLEGMON OF THE BOTTOM OF THE ORAL CAVITY (ANGINA OF ZHENSUL-LUDWIG)

### ABSCESSSES AND PHLEGMONS OF THE BOTTOM OF THE ORAL CAVITY

| PURULENT                                                                                                                             | PUTREFACTIVE-NECROTIC |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 1. Abscess of the maxillofacial groove<br>2. Phlegmon of the sublingual area<br>3. Spilled phlegmon of the bottom of the oral cavity | Angina Ginsula-Ludwig |

### LOCAL SIGNS

| PURULENT                                                                                                                                                                                   | PUTREFACTIVE-NECROTIC                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Painful or impossible swallowing, limited tongue movement, pain.<br>2. The mouth is closed or half-open, the bottom of the mouth is bulging, the tongue is pushed up, vividly hyperemic | 1. Rapid increase of edema, infiltration under the tongue and on the neck.<br>2. There are brown or purple spots on the skin of the upper neck.<br>3. Crepitation under the skin.<br>4. Reduced sensitivity.<br>5. The wound has rotting muscles, eyes, scanty bloody effusion.<br>6. Speech disorder, swallowing, chewing, breathing, asphyxia. |

### GENERAL STATUS

| PURULENT                                                                                                                                          | PUTREFACTIVE-NECROTIC                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Body temperature up to 39 °C.<br>2. Intoxication: collapse, shock.<br>3. Toxic damage to the liver, kidneys, heart muscle.<br>4. Leukocytosis. | 1. Body temperature is 40 ° C and above.<br>2. Excitement, delirium, sticky sweat.<br>3. Severe cardiovascular insufficiency.<br>4. Leukopenia, erythropenia, ESR up to 60-70 mm/h. |

### COMPLICATIONS

|             |          |        |
|-------------|----------|--------|
| Mediastinit | Asphyxia | Sepsis |
|-------------|----------|--------|

### Treatment

| PURULENT                                                                                                                                                                                                                                                                                                                                                                                                       | PUTREFACTIVE-NECROTIC                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. The phlegmon of the bottom of the oral cavity is opened by a wide collar-shaped incision from the skin of the submandibular triangles.</li> <li>2. Deep drainage of the wound.</li> <li>3. Irrigation of the wound with antiseptics.</li> <li>4. Antibacterial, detoxifying, restorative, symptomatic.</li> <li>5. Tracheostomy according to indications.</li> </ol> | <ol style="list-style-type: none"> <li>1. A collar-like incision on the skin of the upper neck.</li> <li>2. Revision of the root of the language, near-pharyngeal spaces.</li> <li>3. Irrigation of wounds through drainage tubes with oxygen, antiseptics.</li> <li>4. Administration of polyvalent anti-gangrenous serum.</li> <li>5. Tracheostomy according to indications.</li> </ol> |

## GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC SECTION

### ABSCESSSES AND PHLEGMONS OF THE TONGUE

#### ABSCESSSES AND PHLEGMONS OF THE TONGUE

|                         |                                     |
|-------------------------|-------------------------------------|
| Abscesses of the tongue | Phlegmons of the root of the tongue |
|-------------------------|-------------------------------------|

#### ETIOLOGY AND PATHOGENESIS

|                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------|
| Injuries of the tongue, suppuration of cysts and lymph nodes of the tongue, the spread of infection from the teeth |
|--------------------------------------------------------------------------------------------------------------------|

#### LOCAL SIGNS

| VIOLATION OF FUNCTION                                                                                                                                                                                     | PATHOLOGICAL ANATOMY                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Severe pain in the tongue.</li> <li>2. Rigidity of the tongue</li> <li>3. Violation of swallowing, breathing, asphyxia.</li> <li>4. Speech disorder.</li> </ol> | The tongue is enlarged, hyperemic, swollen, dense, sharply painful on palpation. Moderate swelling of the tissues of the subcutaneous region, pronounced swelling of the tissues of the sublingual region. |

#### DIFFERENTIAL DIAGNOSIS

|                                            |                     |                                         |                             |
|--------------------------------------------|---------------------|-----------------------------------------|-----------------------------|
| Phlegmons of the bottom of the oral cavity | Tumor of the tongue | Phlegmon of the near - pharyngeal space | Actinomycosis of the tongue |
|--------------------------------------------|---------------------|-----------------------------------------|-----------------------------|

## Treatment

1. Local or general anesthesia, sometimes through a tracheostomy.
2. The abscess can be opened through the surface of the tongue.
3. The root of the tongue is opened by an incision from the side of the chin triangle.
4. Drainage of the sagittal and lateral cellular slits of the tongue.
5. Antibacterial, detoxification, restorative, hyposensitizing treatment, physiotherapy.

## Topic:

### **ODONTOGENIC SINUSITIS: ETIOLOGY, CLINIC, DIFFERENTIAL DIAGNOSIS, TREATMENT.**

### **COMMUNICATION OF THE MAXILLARY SINUS WITH THE ORAL CAVITY, METHODS OF ELIMINATION**

#### **RELEVANCE OF THE TOPIC**

Odontogenic sinusitis is a common disease. Timely diagnosis and proper treatment is the prevention of diseases such as osteomyelitis of the upper jaw, ophthalmic phlegmon, malignant tumors of the upper jaw, trigeminal neuralgia.

Perforation of the bottom of the maxillary sinus can occur when the upper jaw is broken off, as well as when the upper molars and premolars are removed. This complication may be due to the following predisposing factors: close anatomical relationships of the bottom of the sinus and the tip of the root of the tooth, the presence of a destructive inflammatory process in the periapical region, a violation of the technique of performing the tooth extraction operation. In 40% of cases, the roots of the teeth are pushed into the maxillary sinus in the form of protrusions or bumps, which makes it possible to open the bottom of the maxillary sinus during tooth extraction.

#### **THE GENERAL PURPOSE OF THE LESSON**

Be able to recognize clinical manifestations of acute and chronic odontogenic sinusitis, make a plan for examination and treatment of the patient, prevent complications of a general and local nature.

#### **TO REALIZE THE OVERALL GOAL OF THE LESSON, YOU NEED TO BE ABLE TO**

| Specific goals                                                                  | Goals of the initial level of knowledge                                     |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1. To identify the main etiological and pathogenetic signs of acute and chronic | 1. Interpret the data of anatomy and topographic anatomy of the maxilla and |

|                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sinusitis.                                                                                                                                                                                                  | maxillary sinus (Department of Normal Anatomy, Department of Topographic Anatomy).                                                                                                                                                                                           |
| 2. To recognize clinical symptoms and diagnose acute and chronic odontogenic sinusitis, communication of the maxillary sinus with the oral cavity.                                                          | 2. Interpret the mechanisms of development of acute and chronic inflammatory process (Department of Pathological Physiology, Department of General Surgery, Department of Surgical Dentistry).                                                                               |
| 3. Draw up and justify a plan of examination of a patient with acute and chronic odontogenic sinusitis, communication of the maxillary sinus with the oral cavity.                                          | 3. Evaluate and interpret the data obtained during the collection of complaints, anamnesis and assessment of the general condition of the patient (Department of Propaedeutic Therapy, Department of General Surgery, Department of Surgical Dentistry)                      |
| 4. To carry out X-ray diagnostics of odontogenic sinusitis.                                                                                                                                                 | 4. to be guided in the methods of X-ray examination of the paranasal sinuses (Department of radiology with a course of radiation anatomy)                                                                                                                                    |
| 5. To draw up and justify a plan for local surgical treatment of acute and chronic odontogenic sinusitis; to be guided in the methods of plastic communication of the maxillary sinus with the oral cavity. | 5. Interpret the data of clinical laboratory and radiological research methods (Department of Microbiology, Department of Radiology with a course of radiation Anatomy, Department of Propaedeutic Therapy, Department of General Surgery, Department of Surgical Dentistry) |
| 6. Draw up and justify a plan for the general treatment and prevention of complications of a patient with acute and chronic odontogenic sinusitis.                                                          | 6. Interpret the pharmacological characteristics of drugs used in the treatment of acute and chronic inflammatory processes (Department of Pharmacology, Department of Pathological Physiology, Department of Surgical Dentistry)                                            |

## TASKS FOR SELF-CONTROL AND SELF-CORRECTION

### THE INITIAL LEVEL OF KNOWLEDGE

Task 1.

What is the average volume of the maxillary sinus?

1. 5-10 cubic cm

2. 10-12 cubic cm
3. 20-25 cubic cm
4. 30-40 cubic cm
5. 50-60 cubic cm

Task 2.

What epithelium is lined with the maxillary sinus in an adult?

1. Flat non-horny.
2. Flat keratinizing.
3. Multi-layered shimmery.
4. Cylindrical.
5. Cubic.

Task 3.

For the inflammatory process that proceeds according to the hypoallergenic type, it is characteristic:

1. High virulence of microflora.
2. High level of nonspecific resistance of the body.
3. weakly expressed virulence of microflora, low level of sensitization of the body, low level of nonspecific resistance of the body.
4. Pronounced sensitization of the body, low level of nonspecific resistance of the body.
5. High level of nonspecific resistance of the organism, weakly expressed virulence of the microflora.

Task 4.

When studying radiographs, a comparison of the pneumatization of the maxillary sinuses with:

1. Frontal sinuses.
2. Orbits.
3. A lattice maze.
4. The nasal cavity.
5. Oral cavity.

Task 5.

Specify the means of non-specific hyposensitizing therapy.

1. 10% solution of calcium chloride.
2. Staphylococcal toxoid.
3. Staphylococcal antifagin.

4. Diphenhydramine, diazoline, tavegil.

5. Calcium gluconate.

Correct answers to tasks: 1 - 2; 5 - 4.

If the student finds that he is not ready to solve one or more tasks, he must replenish his initial level of knowledge from the relevant sources of information.

After checking the initial level of knowledge, you can begin an in-depth study of this topic.

## **TRAINING CONTENT:**

### **THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO CARRY OUT TARGETED ACTIVITIES**

1. Etiology and pathogenesis of odontogenic sinusitis, communication of the maxillary sinus with the oral cavity.
2. Acute odontogenic sinusitis: clinic, diagnostic methods, principles of treatment and prevention.
3. Chronic odontogenic sinusitis: clinic, diagnostic methods, principles of treatment and prevention.
4. Communication of the maxillary sinus with the oral cavity: clinic, diagnostic methods, principles of treatment and prevention.
5. Complications of acute and chronic odontogenic sinusitis, communication of the maxillary sinus with the oral cavity, principles of treatment and prevention.

Relevant information will help you master these questions.

### **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION THE TOPIC UNDER STUDY**

Task 1.

Patient T., 38 years old, was hospitalized in the maxillofacial department for surgical treatment with a diagnosis of chronic left-sided odontogenic sinusitis, maxillary sinus junction with the oral cavity through the hole of the 25th tooth. Which walls of the maxillary sinus are mainly affected by odontogenic sinusitis?

1. The upper and inner walls.
2. Upper and rear walls.
3. Front and inner walls.
4. Lower and outer walls.
5. Rear and lower walls.

Task 2.

In order to clarify the diagnosis, patient D., 34 years old, underwent a contrast X-ray examination of the right maxillary sinus. What drug is used for this study?

1. Verografin.
2. Iodolipol.
3. Cardiotrast.
4. Urotrast.
5. Barium.

Task 3.

Patient L., 28 years old, after a clinical and X-ray examination, a preliminary diagnosis was made: chronic odontogenic sinusitis on the left. What symptoms are pathognomonic for chronic odontogenic sinusitis?

1. Sharp pain in the upper jaw.
2. Sharp headaches with irradiation along the second branch of the trigeminal nerve.
3. The presence of a message of the oral cavity through the hole of the removed tooth, the absence of other symptoms.
4. Discharge of mucous contents from the corresponding half of the nose.
5. Discharge of purulent contents from the corresponding half of the nose, communication of the maxillary sinus with the oral cavity.

Task 4.

Patient B., 32 years old, applied for an appointment with a dental surgeon with complaints about the ingress of air and liquid food from the oral cavity into the nasal cavity through the hole of the 26 tooth removed 6 days ago. The doctor diagnosed: The maxillary sinus junction with the oral cavity through the hole of the 26th tooth. For what period of time is the communication of the maxillary sinus with the oral cavity through the hole of the removed tooth considered to be a joint?

1. Up to 7-8 days.
2. Up to 10-12 days.
3. Up to 10-14 days.
4. Up to 15-20 days.
5. Up to 1 month.

Task 5.

Patient K., 26 years old, after a clinical and X-ray examination, a dental surgeon made a preliminary diagnosis: acute odontogenic sinusitis on the left and performed a puncture of the maxillary sinus. What is the content of the maxillary sinus characteristic of acute odontogenic sinusitis?

1. Blood.
2. Serous or purulent exudate.

3. Turbid liquid with an ichorous odor.
4. Light transparent straw-colored liquid.
5. Yellow apolescent liquid with cholesterol crystals.

Task 6.

Patient V., 56 years old, was admitted to the maxillofacial department with complaints of pain in the area of the left maxillary sinus, facial asymmetry, discharge of pus from the left half of the nose, pain in the area of the left eye, diplopia, lacrimation, general weakness, increased body weight to 39.5 kg. The disease is associated with the pain that appeared 3 days ago in the destroyed 27 tooth, which previously periodically bothered, was not treated. Objectively: the face is asymmetrical due to swelling of the left buccal and subglacial areas, the eyelids of the left eye, the skin is slightly hyperemic, exophthalmos and chemosis are noted, purulent discharge from the left half of the nose, mouth opening is slightly limited - up to 3.0 cm between the central incisors, crown 27 is destroyed by 1/2, gray, mucous transitional folds in the area of 25.26 and 27 teeth are smoothed, hyperemic, painful, percussion 27 painful. What complication of acute purulent odontogenic sinusitis has developed in the patient?

1. Abscess of the subglacial region.
2. Abscess of the cheek.
3. Phlegmon of the cheek.
4. Phlegmon of the orbit.
5. Phlegmon of the subglacial region.

Correct answers to tasks: 1 - 4; 5 - 2.

## **ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON**

At the beginning of the lesson, the initial level of students' knowledge on theoretical issues and test tasks is monitored.

After summing up the results of the control of the initial knowledge and their correction, the lesson continues in the hospital department or in the polyclinic, where, under the supervision of a teacher, students conduct curation of patients. During the curation of patients, attention is paid to the importance of proper collection of complaints and anamnesis, assessment of the general and local status of a patient with odontogenic sinusitis or communication of the maxillary sinus with the oral cavity, appointment of X-ray examinations in the diagnosis and choice of treatment tactics. Students participate in carrying out therapeutic and diagnostic manipulations, solve clinical situational tasks on the topic of the lesson.

At the end of the lesson, the final test control of the assimilation of the studied topic is summed up. The actions of students during the curation of patients are analyzed. The result is summed up. A task is given for the next lesson.

## TECHNOLOGICAL MAP OF THE PRACTICAL LESSON

| Stages of practical training                                                                                                                            | Time in min. | Equipment                                                                                                                                               | Venue                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Checking the initial level of students' knowledge                                                                                                       | 20           | A set of test tasks to control the initial level of knowledge                                                                                           | Study room           |
| Under the supervision of a teacher, examination of patients in a polyclinic, hospital, sanitary inspection, participation in the reception of patients. | 155          | A set for examination of patients. Tables, slides, models, a set of radiographs. Situational tasks.<br><br>Graph of the logical structure of the topic. | Polyclinic, hospital |
| Analysis and correction of the assimilation of the studied topic. Final test control.                                                                   | 30           | Test tasks to control the assimilation of the topic                                                                                                     | Study room           |
| Summing up the lesson                                                                                                                                   | 15           |                                                                                                                                                         | Study room           |

### Recommended literature:

#### Main:

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

#### Additional:

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.
3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007
4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

**GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC**  
**ODONTOGENIC SINUSITIS: ETIOLOGY, CLINIC, DIFFERENTIAL**  
**DIAGNOSIS, TREATMENT**

| ETIOLOGY                                                                                                                                                                                               | PATHOGENESIS                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 1. Chronic periodontitis of teeth.<br>2. Perforation, pushing through the root or tooth.<br>3. Suppuration of the parotid cyst.<br>4. Osteomyelitis.<br>5. Venous connection with periodontal disease. | 1. Anatomical features of the maxillary sinus<br>2. Projection of the roots of 765!567 teeth on the bottom of the maxillary sinus. |

**EXAMINATION OF THE PATIENT**

|                                                                           |
|---------------------------------------------------------------------------|
| Survey Examination Probing Rhinoscopy Ro-graphy Endoscopy Cytology Biopsy |
|---------------------------------------------------------------------------|

**SYMPTOMS OF THE DISEASE**

| sharp                                                                                                                                                                                                                                                                                                                                     | CHRONIC                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Discharge of pus from the nasal passage constantly.<br>2. Discharge of pus from the hole of the removed tooth.<br>3. Pus in the punctate.<br>4. Irradiation of pain in the temple, eye.<br>5. Swelling of the cheek.<br>6. Headache, malaise.<br>7. Body temperature up to 38 °C.<br>8. Dimming of the maxillary sinus on the Program. | 1. Periodic nasal congestion.<br>2. Heaviness in the upper jaw.<br>3. Discharge of pus more often in the morning.<br>4. Passage of air and food from mouth to nose.<br>5. Pain during palpation of the anterior wall of the maxillary sinus.<br>6. The presence of a junction through the hole of the removed tooth.<br>7. Periods of exacerbation.<br>8. Homogeneous darkening of the sinus on the Program.<br>9. Proliferation of polyps. |

## DIFFERENTIAL DIAGNOSIS

| sharp                                                                                                      | CHRONIC                                                                             |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 1. Trigeminal neuralgia.<br>2. Acute osteomyelitis in the jaw.<br>3. Infected periarticular cyst in / jaw. | 1. With chronic osteomyelitis.<br>2. With a malignant tumor.<br>3. With root cysts. |

## Treatment

| sharp                                                                                                                                                                                 | CHRONIC                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1. Sanitation of the oral cavity.<br>2. Removal of the causal tooth.<br>3. Drainage through the hole or the lower nasal passage.<br>4. Washing with antiseptics, proteolytic enzymes. | 1. Sanitation of the oral cavity.<br>2. Radical maxillary sinusitis.<br>3. Plastic of the mouth.<br>4. Sinus lavage through rhinostomy. |

## Topic:

### NEODONTOGENIC INFLAMMATORY DISEASES OF THE MAXILLOFACIAL REGION: FURUNCLE, CARBUNCLE, (ETIOLOGY, PATHOGENESIS, CLINIC, DIFFERENTIAL DIAGNOSIS, TREATMENT)

#### RELEVANCE OF THE TOPIC

Boils and carbuncles account for 30% of skin diseases. At the same time, about 28% of boils and carbuncles are localized on the face. Localization of the inflammatory focus is of great importance, depending on the topographic and anatomical features of the maxillofacial region. The most dangerous are boils and carbuncles located in the upper lip area.

#### THE GENERAL PURPOSE OF THE LESSON

Be able to recognize the clinical manifestations of boils and carbuncles of the face and neck, make a plan for examination and treatment of the patient, prevent complications of a general and local nature.

#### TO REALIZE THE OVERALL GOAL OF THE LESSON, YOU NEED TO BE ABLE TO

| Specific goals                                                                                              | Goals of the initial level of knowledge                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. To determine the main etiological and pathogenetic factors of boils and carbuncles of the face and neck. | 1. Apply knowledge of the morphology of the skin, circulatory and lymphatic system of the face and neck (Department of Histology, Department of Skin and |

|                                                                                                                                                                                         |                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                         | Venereal Diseases)                                                                                                                                                                                                                                       |
| 2. To recognize the clinical symptoms of a boil, carbuncle of the face and neck, to make and justify a plan of examination of a patient with a boil and carbuncle of the face and neck. | 2. Evaluate and interpret the data obtained during the collection of complaints, anamnesis and assessment of the general condition of the patient (Department of Propaedeutic Therapy, Department of General Surgery, Department of Surgical Dentistry). |
| 3. Draw up and justify a plan for local (surgical) treatment of furuncle and carbuncle, taking into account the localization of the process.                                            | 3. Interpret the data of clinical and laboratory research methods (Department of Microbiology, Department of Propaedeutics of Internal Diseases, Department of General Surgery)                                                                          |
| 4. Draw up and justify a general treatment plan for boils and carbuncles of the face and neck.                                                                                          | 4. Interpret the pharmacological characteristics of drugs used in the medical treatment of nonspecific inflammatory processes (Department of Pharmacology)                                                                                               |

## TASKS FOR SELF-CONTROL AND SELF-CORRECTION

### THE INITIAL LEVEL OF KNOWLEDGE

#### Task 1.

What does the term osteopholliculitis mean?

1. Serous inflammation of the soft tissues of the lip.
2. Dense, conical, painful papule with a pustule on top, surrounded by an inflammatory roller.
3. Erosion on the mucous membrane, covered with fibrinous plaque.
4. A pustule pierced in the center by a hair.
5. An ulcer covered with a purulent crust.

#### Task 2.

Indicate the direction of large lymphatic vessels.

1. Corresponds to the course of blood vessels.
2. Does not correspond to the course of blood vessels.
3. Corresponds to the course of nerves.
4. In some cases, they correspond to the course of the veins.

5. In some cases, they correspond to the course of nerves.

Task 3.

Toxic granularity of leukocytes indicates:

1. A favorable outcome of the disease.
2. On the progression and unfavorable outcome of the disease.
3. It does not matter for the characteristics of the outcome of the disease.
4. Characterizes the outcome of only specific diseases.
5. The development of sepsis.

Task 4.

For the inflammatory process that proceeds according to the hyperergic type, it is characteristic:

1. High virulence of microflora, pronounced sensitization of the body, low level of nonspecific resistance of the body.
2. High level of nonspecific resistance of the body.
3. Low level of sensitization of the body, low level of nonspecific resistance of the body.
4. Pronounced sensitization of the body, a high level of nonspecific resistance of the body.
5. High level of nonspecific resistance of the organism, weakly expressed virulence of the microflora.

Task 5.

The most common causative agent of boils and carbuncles are:

1. Monocultures of streptococci.
2. Monocultures of staphylococci.
3. Monocultures of E. coli.
4. Proteus monocultures.
5. Associations of proteus and E. coli.

Task 6.

How long after the introduction of passive immunization agents are able to increase the resistance of the patient's body?

1. After 1-2 days.
2. After 1-2 hours
3. After 1-2 weeks.
4. After 1-2 months.
5. After seven days.

Correct answers to tasks: 1-4, 6-2.

If the student finds that he is not ready to solve one or more tasks, he must replenish his initial level of knowledge from the relevant sources of information.

After checking the initial level of knowledge, you can begin an in-depth study of this topic.

### **TRAINING CONTENT:**

#### **THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO CARRY OUT TARGETED ACTIVITIES**

1. Etiology and pathogenesis of boils and carbuncles of the face and neck.
2. Clinical characteristics of boils and carbuncles of the face and neck.
3. Principles and methods of diagnosis of boils and carbuncles of the face and neck.
4. Methods of local and principles of general treatment of boils and carbuncles of the face and neck.

Relevant information will help you master these questions.

### **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION**

#### **THE TOPIC UNDER STUDY**

##### **Task 1.**

Patient N., 24 years old, turned to a dental surgeon with complaints of pain and swelling in the chin area, increased body temperature, weakness. After the examination, the doctor diagnosed: a boil of the chin. Specify the number of stages of development of the boil.

1. Two.
2. Three.
3. Four.
4. Five.
5. Six.

##### **Task 2.**

From the following, choose the correct definition of a boil

1. Acute purulent-necrotic inflammation of the sebaceous gland.
2. Acute purulent-necrotic inflammation of the sweat gland.
3. Acute purulent-necrotic inflammation of the hair follicle and sweat gland.
4. Acute purulent-necrotic inflammation of the hair follicle and surrounding tissue.
5. Acute purulent-necrotic inflammation of the hair follicle and sweat gland.

##### **Task 3.**

The carbuncle development cycle continues:

1. 3-7 days.
2. 15-18 days.
3. 1-2 days.
4. 12-14 days.
5. 5-7 days.

Task 4.

Is it possible to apply secondary stitches to the wound after opening the complicated form of the boil?

1. Yes, it is always necessary.
2. It is possible at a young age of the patient.
3. It is possible at the discretion of the doctor.
4. Impossible.
5. It is possible with the localization of a boil on the cheek.

Task 5.

Furuncle of what localization is complicated by thrombophlebitis of the facial vein most often?

1. Upper lip, corner of the mouth, under-eye area.
2. The bridge of the nose.
3. The lower lip of the chin.
4. Cheeks, parotid, chewing areas.
5. Nose, outer corner of the eye.

Task 6.

In order to prevent thrombosis of the facial vessels, a patient with carbuncle of the upper lip is prescribed a drug that is an antagonist of indirect coagulants. Choose from the following drugs of the specified action.

1. Tavegil, diazolin, suprastin.
2. Tocopherol, nicotinic acid.
3. Vikasol, ascorbic acid.
4. Fentanyl, promedol, antipyrine.
5. Aspirin, panadol, analgin.

Correct answers to tasks: 3 - 2; 6 - 3.

## **ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON**

At the beginning of the lesson, the initial level of students' knowledge is monitored according to test tasks to determine the initial level of knowledge.

After summing up the results of the control of the initial knowledge and their correction, the lesson continues to the hospital department or in the polyclinic, where, under the supervision of a teacher, students conduct curation of patients. During the curation of patients, attention is paid to the importance of the correct collection of complaints and anamnesis, clinical and laboratory examination of a patient with the pathology under study. In the operating room and dressing room, attention is drawn to surgical approaches in the treatment of carbuncle, furuncle of the face and neck, the phase of the wound process. Students participate in therapeutic and diagnostic manipulations, solve clinical situational tasks on the topic of the lesson.

At the end of the lesson, the final test control of the assimilation of the studied topic is summed up. The actions of students during the curation of patients are analyzed. The result is summed up. A task is given for the next lesson.

### TECHNOLOGICAL MAP OF THE PRACTICAL LESSON

| Stages of practical training                                                                                                                            | Time in min. | Equipment                                                                                                                                           | Venue                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Checking the initial level of students' knowledge                                                                                                       | 20           | A set of test tasks to control the initial level of knowledge                                                                                       | Study room           |
| Under the supervision of a teacher, examination of patients in a polyclinic, hospital, sanitary inspection, participation in the reception of patients. | 155          | A set for examination of patients. Tables, slides, models, a set of radiographs. Situational tasks.<br>Graph of the logical structure of the topic. | Polyclinic, hospital |
| Analysis and correction of the assimilation of the studied topic. Final test control.                                                                   | 30           | Test tasks to control the assimilation of the topic                                                                                                 | Study room           |
| Summing up the lesson                                                                                                                                   | 15           |                                                                                                                                                     | Study room           |

## **Recommended literature:**

### **Main:**

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

### **Additional:**

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.
3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007
4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

## **GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC BOILS AND CARBUNCLES OF THE FACE**

| <b>BOIL</b>                                                                                                                              | <b>CARBUNCLE</b>                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.Limited hyperemia and swelling of the skin<br>2. Necrosis of the hair follicle<br>3. Sharp soreness<br>4. Increase in body temperature | 1.Diffuse hyperemia, pronounced swelling of the skin<br>2. Necrosis of several hair follicles<br>3. Sharp soreness<br>4. Increase in body temperature<br>5. Severe intoxication of the body |

## **DIFFERENTIAL DIAGNOSIS**

|                                                                       |
|-----------------------------------------------------------------------|
| Migrating granuloma<br>Anthrax<br>Actinomycosis<br>Erysipelas<br>Noma |
|-----------------------------------------------------------------------|

## **Treatment**

| <b>SURGICAL</b>           | <b>CONSERVATIVE</b>     |
|---------------------------|-------------------------|
| 1. Opening the infiltrate | 1.General strengthening |

|              |                                                                         |
|--------------|-------------------------------------------------------------------------|
| 2.Necrectomy | 2.Detoxification<br>3.Desensitizing<br>4.Stimulating<br>5.Physiotherapy |
|--------------|-------------------------------------------------------------------------|

### **Topic:**

## **ACTINOMYCOSIS OF THE MAXILLOFACIAL REGION: ETIOLOGY, PATHOGENESIS, CLINIC, DIFFERENTIAL DIAGNOSIS, TREATMENT**

### **RELEVANCE OF THE TOPIC**

Patients with actinomycosis of the face and neck account for about 60-80% of the total number of patients suffering from this disease. According to T.G. Robustova and V.V. Roginsky (1976), actinomycosis among the inflammatory processes of the maxillofacial region is from 6 to 8%. Men get sick 2-3 times more often than women. Most often actinomycosis affects people aged 40-50 years. It has been established that the incidence of actinomycosis is not related to either occupation or place of residence.

### **THE GENERAL PURPOSE OF THE LESSON**

Be able to recognize the clinical manifestations of actinomycosis of the maxillofacial region, make a plan for examination and treatment of the patient, prevent complications of a general and local nature.

### **TO REALIZE THE OVERALL GOAL OF THE LESSON, YOU NEED TO BE ABLE TO**

| Specific goals                                                                                    | Goals of the initial level of knowledge                                                                                                                                    |
|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. To determine the main etiological and pathogenetic factors of actinomycosis.                   | 1.Apply knowledge of the morphology of the skin, circulatory and lymphatic system of the face and neck (Department of Histology, Department of Skin and Venereal Diseases) |
| 2. Recognize the clinical symptoms of actinomycosis of the face and neck.                         | 2. Interpret the data of anatomy and topographic anatomy of the face and neck (Department of Normal Anatomy, Department of Topographic Anatomy).                           |
| 3. Draw up and justify a plan of examination of a patient with actinomycosis of the maxillofacial | 3. Evaluate and interpret the data obtained during the collection of complaints, anamnesis and assessment of the general condition of the patient                          |

|                                                                                                                                 |                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| region.                                                                                                                         | (Department of Propaedeutic Therapy, Department of General Surgery, Department of Surgical Dentistry).                                                                                                                                                                       |
| 4. Draw up and justify a plan for local (surgical) treatment of actinomycosis of the face and neck.                             | 4. Interpret the data of clinical laboratory and radiological research methods (Department of microbiology, Department of Radiology with a course of radiation Anatomy, Department of Propaedeutic Therapy, Department of General Surgery, Department of Surgical Dentistry) |
| 5. Draw up and justify a plan for specific and non-specific treatment, as well as prevention of complications in actinomycosis. | 5. Interpret the pharmacological characteristics of drugs used in the treatment of specific and nonspecific inflammatory processes (Department of Pharmacology, Department of Pathological Physiology, Department of Surgical Dentistry).                                    |

## TASKS FOR SELF-CONTROL AND SELF-CORRECTION

### THE INITIAL LEVEL OF KNOWLEDGE

Task 1.

Which actinomycetes have greater pathogenicity?

1. Aerobic.
2. Anaerobic.
3. The level of pathogenicity is the same.
4. The level of pathogenicity depends on the age of the patient.
5. The level of pathogenicity depends on the time of year.

Task 2.

Most often , lymphopenia develops when:

1. Congenital or secondary syphilis.
2. Toxoplasmosis or tuberculosis.
3. Acute infections and immunodeficiency conditions.
4. Lymphocytic leukemia.
5. Lymphosarcoma.

Task 3.

Optimal X-ray projection for the study of zygomatic arches.

1. Nasopodborodnaya.
2. Nosolobnaya.
3. Lateral radiograph.
4. Overview radiograph.
5. By Kovalenko.

Task 4.

What is an inflammatory infiltrate?

1. It is a spilled purulent inflammation.
2. It is a limited purulent inflammation.
3. This is a non-purulent inflammation of soft tissues.
4. This is a putrefactive-necrotic inflammation of soft tissues.
5. This is hemorrhagic impregnation of soft tissues.

Task 5.

On the basis of which data it is possible to diagnose with sufficient confidence: actinomycosis?

1. Radiological data.
2. Ultrasound data.
3. Clinical and biochemical blood analysis data.
4. Based on the study of the contents from the infiltrate and the detection of mycelium druses.
5. Serological examination data.

Correct answers to tasks: 4 - 3; 5 - 4.

If the student finds that he is not ready to solve one or more tasks, he must replenish his initial level of knowledge on the relevant sources of information.

After checking the initial level of knowledge, you can begin an in-depth study of this topic.

## **TRAINING CONTENT:**

### **THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO CARRY OUT TARGETED ACTIVITIES**

1. Etiology, pathogenesis, characteristics of the pathogen and classification of actinomycosis.
2. Clinical characteristics of various forms of actinomycosis.
3. Principles and methods of diagnosis of actinomycosis, differential diagnosis.

4. Methods of specific and nonspecific treatment of actinomycosis, principles of surgical treatment and prevention of complications.

Relevant information will help you master these questions.

## **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION**

### **THE TOPIC UNDER STUDY**

Task 1.

Patient K., 34 years old, was hospitalized in the maxillofacial department with a preliminary diagnosis: actinomycosis of the neck on the right. To clarify the diagnosis, a morphological study of the infiltrate was carried out. Which cells are characteristic of actinomycosis?

1. Hargraves cells.
2. Schwann cells.
3. Pirogov-Langhans cells.
4. Xanthoma cells.
5. Pappengame cells.

Task 2.

Patient L., 54 years old, was hospitalized in the maxillofacial department with a preliminary diagnosis: actinomycosis of the parotid-masticatory region on the right, subcutaneous-muscular form. Specify the signs characterizing the subcutaneous-muscular form of actinomycosis.

1. The presence of gummosis formations in the fiber.
2. The presence of infiltrates that can be suppressed.
3. The presence of infiltrates, gum formations, abscesses.
4. The presence of keloid scars.
5. The presence of keloid scars, gum formations in the fiber.

Task 3.

After an injury suffered 2 months ago, patient N., 46 years old, noticed a "woody" infiltrate in the area of the angle of the lower jaw on the left. A month later, an abscess spontaneously opened in this area, a limited painful swelling appeared nearby. The doctor made a preliminary diagnosis: actinomycosis, musculoskeletal form. Which of the listed additional research methods should be carried out to establish a diagnosis in the first place?

1. Radiography of the lower jaw.
2. Biopsy.
3. A skin-allergic test with actinolyse, examine the contents of the mycelium.
4. RW.

5. Tuberculin tests.

Task 4.

Patient N., 49 years old, is undergoing treatment for actinomycosis using immunotherapy. Is it possible to accelerate the course of immunotherapy during the treatment of actinomycosis in a patient?

1. It is always possible.
2. It is possible only with the cutaneous form of actinomycosis.
3. It is possible only with the cutaneous-subcutaneous form of actinomycosis.
4. Impossible.
5. It is possible with skin and muscle forms of actinomycosis

Task 5.

In patient N., 43 years old, the course of actinomycosis was complicated by a lesion of the submandibular salivary glands. Specify the typical localization of actinomycous granuloma in the affected salivary gland.

1. In the parenchyma of the gland.
2. Between the lobules of the gland.
3. Between the lobules of the gland, followed by a transition to the parenchyma.
4. In the parenchyma of the gland, followed by a transition to the surrounding tissues.
5. In the parenchyma of the gland, followed by the transition to the lobules of the gland.

Correct answers to tasks: 4 - 4; 5 - 3.

## **ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON**

At the beginning of the lesson, the initial level of students' knowledge on theoretical issues and test tasks is monitored.

After summing up the results of the control of the initial knowledge and their correction, classes are held in the department of the hospital or in the polyclinic, where, under the supervision of a teacher, students conduct curation of patients. During the curation of patients, attention is paid to the importance of the correct collection of complaints and anamnesis, clinical and laboratory examination of a patient with the pathology under study. In the operating room and dressing room, attention is drawn to surgical accesses in the treatment of actinomycosis. Students participate in therapeutic and diagnostic manipulations, solve clinical situational tasks on the topic of the lesson.

At the end of the lesson, the final test control of the assimilation of the studied topic is summed up. The actions of students during the curation of patients are analyzed. The result is summed up. A task is given for the next lesson.

## TECHNOLOGICAL MAP OF THE PRACTICAL LESSON

| Stages of practical training                                                                                                                            | Time in min. | Equipment                                                                                                                                               | Venue                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Checking the initial level of students' knowledge                                                                                                       | 20           | A set of test tasks to control the initial level of knowledge                                                                                           | Study room           |
| Under the supervision of a teacher, examination of patients in a polyclinic, hospital, sanitary inspection, participation in the reception of patients. | 155          | A set for examination of patients. Tables, slides, models, a set of radiographs. Situational tasks.<br><br>Graph of the logical structure of the topic. | Polyclinic, hospital |
| Analysis and correction of the assimilation of the studied topic. Final test control.                                                                   | 30           | Test tasks to control the assimilation of the topic                                                                                                     | Study room           |
| Summing up the lesson                                                                                                                                   | 15           |                                                                                                                                                         | Study room           |

### Recommended literature:

#### Main:

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

#### Additional:

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.
3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007
4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

## GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC ACTINOMYCOSIS OF THE MAXILLOFACIAL REGION

### WAYS OF INFECTION

|           |            |
|-----------|------------|
| Exogenous | Endogenous |
|-----------|------------|

### DISTRIBUTION PATHS

|         |             |             |
|---------|-------------|-------------|
| Contact | Lymphogenic | Hematogenic |
|---------|-------------|-------------|

### Diagnostics

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| 1. Anamnesis.<br>2. Inspection.<br>3. Clinic data.<br>4. Biopsy data.<br>5. Skin allergy test data |
|----------------------------------------------------------------------------------------------------|

### DIFFERENTIAL DIAGNOSIS

|                                                                                                     |
|-----------------------------------------------------------------------------------------------------|
| 1. Periostitis.<br>2. Osteomyelitis.<br>3. Migrating granuloma.<br>4. Tuberculosis.<br>5. Syphilis. |
|-----------------------------------------------------------------------------------------------------|

### Treatment

| SURGICAL                                          | MEDICINAL                                                                                                                 |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Puncture of lymph nodes<br>Opening the infiltrate | 1. Actinolysis therapy.<br>2. Antibiotic therapy.<br>3. Stimulating therapy.<br>4. X-ray therapy.<br>5. Physical therapy. |

## **Topic:**

# **ODONTOGENIC LYMPHADENITIS, ADENOPHLEGMON: ETIOLOGY, PATHOGENESIS, CLINIC, DIAGNOSIS, TREATMENT**

## **RELEVANCE OF THE TOPIC**

The clinical course of odontogenic lymphadenitis is very diverse and depends on the type of inflammatory process (acute, chronic, aggravated chronic) and the localization of the lymph node involved in inflammation. Complications of lymphadenitis in the form of adenophlegmon of some localizations can threaten the patient's life.

Therefore, a timely and correct diagnosis of these diseases allows for adequate surgical and drug treatment, as well as to prevent the development of severe complications of a general and local nature.

## **THE GENERAL PURPOSE OF THE LESSON**

Be able to identify the main signs of odontogenic lymphadenitis, adenophlegmon and draw up a scheme for the examination and treatment of patients with these diseases.

## **TO REALIZE THE OVERALL GOAL OF THE LESSON, YOU NEED TO BE ABLE TO**

| Specific goals                                                                                                                  | Goals of the initial level of knowledge                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. To determine the etiology and pathogenesis of odontogenic and non-odontogenic lymphadenitis of the maxillofacial region.     | 1. Interpret the data of the topography of the lymph nodes and the vessels connecting them in the head and neck (Department of Normal Anatomy, Department of Topographic Anatomy).                                                                                                                                      |
| 2. To determine the clinical signs of acute and chronic lymphadenitis of the maxillofacial region.                              | 2. Interpret the signs of acute and chronic inflammatory process (Department of Pathological Anatomy).                                                                                                                                                                                                                  |
| 3. To identify clinical signs of maxillofacial adenophlegmon.                                                                   | 3. Interpret the signs of the course of the inflammatory process in soft tissues (Department of Pathological Physiology, Department of General Surgery).                                                                                                                                                                |
| 4. Make a scheme of examination of patients with acute and chronic lymphadenitis and adenophlegmon of the maxillofacial region. | 4. Evaluate and interpret the data obtained during the collection of complaints, anamnesis and assessment of the general condition of the patient, data from clinical and laboratory research methods (Department of Microbiology, Department of Propaedeutics of Internal Diseases, Department of Surgical Dentistry.) |
| 5. Draw up a scheme of complex (surgical and medical) treatment of a                                                            | 5. To interpret the dosages and effects of drugs used in the treatment of                                                                                                                                                                                                                                               |

|                                                                                            |                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| patient with acute and chronic lymphadenitis and adenophlegmon of the maxillofacial region | inflammatory processes, to orient oneself in physiotherapeutic methods of treatment of various stages of the inflammatory process (Department of Pharmacology, Department of Physiotherapy). |
|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## TASKS FOR SELF-CONTROL AND SELF-CORRECTION

### THE INITIAL LEVEL OF KNOWLEDGE

Task 1.

The deep group of lymph nodes of the parotid region consists of:

1. 1-3 knots.
2. 3-5 knots.
3. 12-13 knots.
4. 7-12 knots.
5. 6-9 knots.

Task 2.

What fibers innervate the muscle cells that are located in the capsule and trabeculae of the lymph nodes?

1. Sympathetic fibers.
2. Parasympathetic fibers.
3. Parasympathetic and sympathetic fibers.
4. Depending on the location of the node.
5. Depending on the stage of formation of the lymphatic system.

Task 3.

Lymph nodes localized in the parotid gland collect lymph from:

1. Upper and lower incisors and canines.
2. Upper and lower premolars.
3. Upper and lower molars.
4. Temporal, frontal, parietal, parotid areas.
5. Upper and lower lips.

Task 4.

Acute nonspecific purulent inflammatory process in soft tissues is characterized by:

1. The presence of fistulas.
2. The presence of sequestration.

3. The presence of a woody infiltrate with many fistulas.
4. High body temperature and high local temperature.
5. The presence of ulcers.

#### Task 5.

The role of the lymphatic system in purulent lesions of the body is to:

1. Resorption of bacteria from surrounding tissues and their transportation to the lymph nodes.
2. Resorption of bacteria from surrounding tissues and their accumulation.
3. Transportation of bacteria into the arterial bed.
4. Transportation of bacteria into the venous bed.
5. Resorption of bacteria from surrounding tissues and their transportation into the bloodstream.

Correct answers to tasks: 1-2, 2-2.

### **TRAINING CONTENT:**

#### **THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO CARRY OUT TARGETED ACTIVITIES**

1. Etiology and pathogenesis of odontogenic and non-odontogenic lymphadenitis of the maxillofacial region.
2. Acute odontogenic lymphadenitis: pathogenesis, clinical characteristics.
3. Chronic odontogenic lymphadenitis: pathogenesis, clinical characteristics.
4. Clinical characteristics of maxillofacial adenophlegmon.
5. Methods and principles of treatment of acute and chronic lymphadenitis, maxillofacial adenophlegmon.

Relevant information will help you master these questions.

### **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION**

#### **THE TOPIC UNDER STUDY**

##### Task 1.

Patient N., 34 years old, was hospitalized in the maxillofacial department with a diagnosis of acute odontogenic lymphadenitis of the subcutaneous region. Which microorganism is most often the causative agent of acute lymphadenitis of the face and neck?

1. Streptococcus.
2. Staphylococcus aureus.
3. E. coli.

4. Proteus.

5. Mixed microflora.

Task 2.

Patient L., 43 years old, turned to a dentist with complaints of a tumor-like formation in the thickness of the left parotid gland, which appeared two days ago after the skin around the abrasion of the left parotid area, received during shaving, became inflamed. The doctor diagnosed pseudoparotitis of Herzenberg. What is it?

1. Lymphadenitis of the parotid salivary gland.

2. Cyst of the parotid salivary gland.

3. Mixed tumor of the parotid salivary gland.

4. Mumps is non-epidemic.

5. Mumps epidemic.

Task 3.

Patient S., 50 years old, a resident of rural areas, a cattle breeder, turned to the dentist with complaints about a conglomerate of enlarged lymph nodes fused together by inflammatory infiltration in the area of the middle jugular chain on the left. The doctor suggested specific lymphadenitis. What is it caused by?

1. Pseudomonas aeruginosa.

2. Streptococci.

3. Staphylococci.

4. Mycobacterium tuberculosis.

5. Mixed microflora.

Task 4.

Patient N., 36 years old, was hospitalized in the maxillofacial department with a diagnosis of chronic lymphadenitis of the left submandibular region. What are pathoanatomic changes in lymph nodes characterized by prolonged chronic lymphadenitis?

1. Serous infiltration of lymph nodes.

2. Purulent infiltration of lymph nodes with serous infiltration of surrounding tissues.

3. Growth of connective tissue.

4. Proliferation of fibrous tissue, flattening of the node capsule.

5. Hyperplasia of lymphatic elements.

Task 5.

Patient N., 46 years old, was hospitalized in the maxillofacial department with suspected acute lymphadenitis of the left parotid salivary gland. In order to carry out differential diagnosis and clarify the diagnosis, a contrast X-ray examination

(sialography) of the left parotid salivary gland was performed. Specify the X-ray picture characteristic of lymphogenic mumps.

1. A sharp expansion of all the ducts of the parotid gland.
2. Sharp narrowing of all the ducts of the parotid gland.
3. Accumulation of a contrast agent of the "grape cluster" type.
4. Accumulation of contrast agent by the type of "ink spot".
5. Sharp narrowing of the large ducts of the parotid gland.

Task 6.

Patient D., 36 years old, was hospitalized in the maxillofacial department with a preliminary diagnosis: chronic lymphadenitis of the subcutaneous region. Choose the most significant diagnostic method that allows you to differentiate chronic lymphadenitis from cysts of various etiologies.

1. Sialography.
2. Puncture.
3. Thermography.
4. Electrodontodiagnostics.
5. Ultrasound.

Task 7.

Patient O., 28 years old, turned to a dentist with complaints of pain in the right submandibular triangle, weakness, high (38.5 °C) body temperature, facial asymmetry. A week ago, the destroyed 46 tooth fell ill, touching the tooth became sharply painful. Four days ago, a "ball" appeared in the right submandibular triangle, which at first was slightly painful when felt and mobile, and then the pain in this area began to increase. The "ball" began to lose its bearings when feeling, ceased to be mobile. The night before, a tissue seal formed at this place, the contours of the "ball" disappeared. Today, the pain has intensified, the general and local temperature has increased, redness of the skin has appeared. Choose the most likely diagnosis.

1. Odontogenic acute serous lymphadenitis of the right submandibular triangle.
2. Odontogenic acute purulent lymphadenitis of the right submandibular triangle.
3. Odontogenic chronic lymphadenitis of the right submandibular triangle.
4. Adenophlegmon of the right submandibular triangle.
5. Specific lymphadenitis of the right submandibular triangle.

Task 8.

Patient R., 67 years old, was hospitalized in the maxillofacial department with the diagnosis: odontogenic acute serous lymphadenitis of the left submandibular region. When prescribing general anti-inflammatory treatment to elderly patients with acute serous lymphadenitis, it is necessary to remember that:

1. The level of concentration of antibiotics in their blood is lower than that of young people.
2. The level of concentration of antibiotics in their blood is higher than that of young people.
3. The level of concentration of antibiotics does not depend on age.
4. The level of concentration of antibiotics depends only on the stage of the disease.
5. The level of concentration of antibiotics depends only on the route of its administration.

Correct answers to tasks: 1-2, 7-4, 8-2.

### **ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON**

At the beginning of the lesson, the initial level of knowledge on test tasks is monitored.

After summing up the results of the control of the initial level of knowledge, students, under the supervision of a teacher, begin to curate patients with lymphadenitis, adenophlegmon, who are in the hospital; take part in performing individual diagnostic and therapeutic manipulations; analyze data from clinical and laboratory methods of examination of patients, solve situational clinical tasks.

When conducting classes in a polyclinic, students, under the supervision and with the help of a teacher, take part in performing individual diagnostic and therapeutic manipulations when receiving patients, solve situational clinical tasks.

At the end of the lesson, the final test control of the assimilation of the studied topic is summed up. The actions of students during the curation of patients are analyzed. The result is summed up. A task is given for the next lesson.

### **TECHNOLOGICAL MAP OF THE PRACTICAL LESSON**

| Stages of practical training                                                                                                       | Time in min. | Equipment                                                                                                 | Venue                                                        |
|------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Checking the initial level of students' knowledge                                                                                  | 20           | A set of test tasks to control the initial level of knowledge                                             | Study room                                                   |
| Under the supervision of a teacher, students curate patients with lymphadenitis, adenophlegmon; perform individual therapeutic and | 155          | Medical documentation of polyclinic and hospital, situational tasks.<br>Graph of the logical structure of | Maxillofacial department or surgical office of a polyclinic. |

|                                                                                                                                    |    |                                                     |            |
|------------------------------------------------------------------------------------------------------------------------------------|----|-----------------------------------------------------|------------|
| diagnostic manipulations with the help of a teacher; analyze data from clinical and laboratory methods of examination of patients. |    | the topic.                                          |            |
| Analysis and correction of the assimilation of the studied topic. Final test control.                                              | 30 | Test tasks to control the assimilation of the topic | Study room |
| Summing up the lesson                                                                                                              | 15 |                                                     | Study room |

### **Recommended literature:**

Main:

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

Additional:

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.
3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007
4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

## **GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC ODONTOGENIC LYMPHADENITIS, ADENOPHLEGMON: ETIOLOGY, PATHOGENESIS, CLINIC, DIAGNOSIS, TREATMENT**

### **LYMPHADENITIS**

#### **Classification**

|                    |                          |
|--------------------|--------------------------|
| Sharp              | Chronic                  |
| Serous<br>Purulent | Hyperplastic<br>Purulent |

### ETIOLOGY

|                                                        |                                                                                       |
|--------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1. Periodontitis<br>2. Periostitis<br>3. Osteomyelitis | Infectious diseases:<br>- angina<br>- chronic tonsillitis<br>- pustular skin diseases |
|--------------------------------------------------------|---------------------------------------------------------------------------------------|

### DIFFERENTIAL DIAGNOSIS

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| Tuberculosis<br>Actinomycosis<br>Syphilis<br>Sialoadenitis<br>Adenophlegmon<br>Migrating granuloma |
|----------------------------------------------------------------------------------------------------|

### Treatment

|                                                                 |           |               |
|-----------------------------------------------------------------|-----------|---------------|
| Surgical (opening of the infiltrate, removal of the lymph node) | Medicinal | Physiotherapy |
|-----------------------------------------------------------------|-----------|---------------|

### Topic:

## INFLAMMATORY AND DYSTROPHIC DISEASES OF THE SALIVARY GLANDS

### RELEVANCE OF THE TOPIC

Salivary glands take an active part in the performance of a number of functions of the human body: digestive, excretory, endocrine, anti-inflammatory. In addition, they participate in water, fat metabolism and affect the overall nutrition of the body. Saliva contains a bacteriostatic substance (lysozyme, bacteriolysin) that inhibits the function of pneumococci, streptococci, salmonella, intestinal and diphtheria bacilli. The differential activity of the salivary glands is greatly influenced not only by external factors, but also by the state of internal organs and systems.

## THE GENERAL PURPOSE OF THE LESSON

To be able to recognize clinical signs of inflammatory and dystrophic diseases of the salivary glands, to draw up a scheme of examination and treatment of patients with this pathology.

## TO REALIZE THE OVERALL GOAL OF THE LESSON, YOU NEED TO BE ABLE TO

| Specific goals                                                                                                                | Goals of the initial level of knowledge                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. To identify the main etiological and pathogenetic factors of inflammatory and dystrophic diseases of the salivary glands   | 1. Interpret the anatomy and physiological function of the salivary glands (Department of Normal Anatomy, Department of Topographic Anatomy and Operative Surgery, Department of Physiology).                                                                                 |
| 2. Recognize the clinical symptoms of inflammatory and dystrophic diseases of the salivary glands                             | 2. Evaluate and interpret the data obtained during the collection of complaints, anamnesis and assessment of the general and local status of the patient (Department of Propaedeutics of Internal Diseases, Department of General Surgery, Department of Surgical Dentistry). |
| 3. Draw up and justify a plan of examination of patients with inflammatory and dystrophic diseases of the salivary glands.    | 3. Interpret the morphological essence of inflammatory and dystrophic processes in the salivary glands (Department of Pathological Physiology, Department of Pathological Anatomy).                                                                                           |
| 4. Draw up and justify a plan for general and local treatment of inflammatory and dystrophic diseases of the salivary glands. | 4. Interpret the pharmacological characteristics of drugs used for local and general treatment of inflammatory and dystrophic diseases, interpret methods of physiotherapy treatment (Department of Pharmacology, Department of Physiotherapy).                               |

## TASKS FOR SELF-CONTROL AND SELF-CORRECTION

### THE INITIAL LEVEL OF KNOWLEDGE

Task 1.

Specify the large salivary glands.

1. Parotid, sublingual, submandibular.

2. Parotid, buccal, palatine.
3. Submandibular, labial, palatal.
4. Sublingual, labial, palatal.
5. Parotid, sublingual, buccal.

Task 2.

The internal border of the submandibular salivary gland is represented by:

1. The diaphragm of the bottom of the oral cavity and the chin-hyoid muscle.
2. The diaphragm of the bottom of the oral cavity and the hyoid-lingual muscle.
3. The diaphragm of the bottom of the oral cavity and the bicuspid muscle.
4. The diaphragm of the bottom of the oral cavity and the maxillofacial muscle.
5. The diaphragm of the bottom of the oral cavity and the hyoid bone.

Task 3.

The patient has an increased saliva secretion. What is the name of this symptom?

1. Hyposialy.
2. Sialorrhea.
3. Siyalov.
4. Xerostomia.
5. Sialolithiasis.

Task 4.

Which of the following substances can be used for contrast radiography of salivary glands?

1. Iodine.
2. Iodinol.
3. Diamond green solution.
4. Furacilin solution.
5. Dimexide.

Task 5.

An oblique projection is used for X-ray examination of the parotid salivary gland. Which projection is most appropriate for X-ray examination of submandibular salivary glands?

1. Axial.
2. Semi-axial.
3. Side.
4. Direct.

5. Nosolobnaya.

Correct answers to tasks: 1-1, 3-2.

If the student finds that he is not ready to solve one or more tasks, he must replenish his initial level of knowledge from the relevant sources of information.

After checking the initial level of knowledge, you can begin an in-depth study of this topic.

### **TRAINING CONTENT:**

#### **THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO CARRY OUT TARGETED ACTIVITIES**

1. Etiology, pathogenesis and classification of inflammatory and dystrophic diseases of the salivary glands.
2. Acute sialoadenitis: clinic, diagnosis, principles of treatment, prevention of complications.
3. Chronic sialoadenitis: clinic, diagnosis, principles of treatment.
4. Sialoses, syndromes with damage to the salivary glands (Sjogren's syndrome, Mikulich's syndrome): clinic, diagnosis, principles of treatment.

#### **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION THE TOPIC UNDER STUDY**

Task 1.

Patient D., 16 years old, was diagnosed with epidemic mumps ("mumps") of moderate severity. To which group of mumps on an etiological basis does this disease belong?

1. Bacterial.
2. Viral.
3. Hormonal.
4. Allergic.
5. Specific.

Task 2.

Examination of patient S., 34 years old, revealed complaints of bursting, radiating pain in the area of the right parotid salivary gland; swelling of the entire right parotid area, slight hyperemia of the skin in this area; narrowing of the right auditory canal; painful opening of the mouth, some dryness of the oral mucosa, with light massaging of the gland, a small amount was obtained from the duct turbid with an admixture of pus saliva. What disease can be assumed?

1. Phlegmon of the parotid region on the right.

2. Acute purulent otitis media.
3. Acute epidemic mumps.
4. Acute non-epidemic mumps.
5. Mikulich's disease.

Task 3.

Patient K., 18 years old, suffered acute aphthous stomatitis. After treatment of the disease, the patient had complaints of acute stabbing pains in the area of the mucous membrane of the left cheek, especially when eating. Objectively: the excretory duct of the left parotid gland is gaping, hyperemic, edematous. When pressing on the posterior part of the duct, a drop of pus is released. The gland itself is without pathological changes. What disease can be assumed?

1. Chronic sialoadenitis.
2. Acute epidemic mumps.
3. Abscess of the excretory duct of the parotid salivary gland.
4. Acute sialodochitis.
5. Salivary stone disease.

Task 4.

The patient was diagnosed with mumps in the stage of increasing inflammatory phenomena. What is the doctor's tactics in this case?

1. Prescribe contrast sialography.
2. Make an examination plan and prescribe conservative therapy.
3. Make an examination plan and urgently open the salivary gland.
4. Make a survey plan and prescribe a salivary diet.
5. Make a treatment plan and prescribe radiotherapy.

Task 5.

In patient P., 44 years old, the excretory ducts of the IV-V order are not determined on the sialogram, cavities filled with contrast mass are determined in the terminal parts of the gland. What disease is characterized by this X-ray picture?

1. Chronic sialodochitis.
2. Chronic parenchymal sialoadenitis.
3. Chronic interstitial sialoadenitis.
4. Mikulich's disease.
5. Синдром Шегрена.

Task 6.

The essence of which disease of the parotid gland is the proliferation of connective tissue stroma of the gland?

1. Acute non-epidemic mumps.

2. Mikulich's disease.
3. Chronic interstitial mumps.
4. Chronic parenchymal mumps.
5. Sjogren's syndrome.

Task 7.

A patient turned to a dental surgeon with complaints of recurrent swelling in the parotid areas, dryness of the oral cavity, multiple cervical caries. From the anamnesis, it was established that the patient suffers from rheumatoid arthritis, xeroderma and xerophthalmia. On examination: parotid and submandibular salivary glands are enlarged, dense, bumpy, painless on palpation. Mouth opening is free. The mucous membrane of the oral cavity is dry. The excretory ducts of the large salivary glands gape. During the massage of the glands, several drops of viscous turbid saliva were obtained. What disease can be assumed in the patient?

1. Chronic interstitial mumps.
2. Sjogren's syndrome.
3. Chronic sialodochitis.
4. Mikulich's disease.
5. Acute mumps.

Correct answers to tasks: 1-2, 7-2.

### **ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON**

At the beginning of the lesson, the initial level of knowledge on test tasks is monitored.

After checking the initial level of knowledge, the lesson continues in the clinical hall (outpatient surgery or hospital department), where, under the supervision of a teacher, students conduct a clinical examination of patients with pathology of the salivary glands, draw up a plan for additional methods of examination and treatment. Then students solve clinical situational tasks on the diagnosis, examination and treatment of patients with inflammatory and dystrophic diseases of the salivary glands.

At the end of the lesson, the final test control of the assimilation of the studied topic is summed up. The actions of students during the curation of patients are analyzed. The result is summed up. A task is given for the next lesson.

### **TECHNOLOGICAL MAP OF THE PRACTICAL LESSON**

| Stages of practical training                                         | Time in min. | Equipment                                                         | Venue                                                       |
|----------------------------------------------------------------------|--------------|-------------------------------------------------------------------|-------------------------------------------------------------|
| Checking the initial level of students' knowledge                    | 20           | A set of test tasks to control the initial level of knowledge     | Study room                                                  |
| Participation in the curation of patients, clinical examination of a | 155          | A tool for the examination and treatment of patients, situational | The surgical office of the polyclinic. Surgical department, |

|                                                                                                                                                                                                                                                            |    |                                                                                                                                                  |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <p>patient with diseases of the salivary glands - under the supervision of a teacher.</p> <p>Participation in diagnostic and therapeutic manipulations in patients with diseases of the salivary glands.</p> <p>Solving clinical situational problems.</p> |    | <p>tasks; radiographs; laboratory data;</p> <p>medical documentation; situational tasks.</p> <p>Graph of the logical structure of the topic.</p> | operating room |
| <p>Analysis and correction of the assimilation of the studied topic. Final test control.</p>                                                                                                                                                               | 30 | <p>Test tasks to control the assimilation of the topic</p>                                                                                       | Study room     |
| <p>Summing up the lesson</p>                                                                                                                                                                                                                               | 15 |                                                                                                                                                  | Study room     |

### **Recommended literature:**

#### **Main:**

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

#### **Additional:**

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.
3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007
4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

### **GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC**

# INFLAMMATORY AND DYSTROPHIC DISEASES OF THE SALIVARY GLANDS

## Classification

| INFLAMMATORY                                                                                                                                                                             | DYSTROPHIC                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Sialodochites</p> <p>Mumps</p> <p>Submaxillites</p> <p>Specific:</p> <ol style="list-style-type: none"> <li>1. Tuberculosis</li> <li>2. Actinomycosis</li> <li>3. Syphilis</li> </ol> | <p>Sialoses:</p> <ol style="list-style-type: none"> <li>1. Allergic</li> <li>2. Hormonal</li> <li>3. Neurogenic</li> </ol> <p>Syndromes with lesions of the salivary glands:</p> <ol style="list-style-type: none"> <li>1. Sjogren</li> <li>2. Mikulich</li> </ol> |

## DIAGNOSTIC METHODS

| Clinical                                                                                                                                                                     | Hardware                                                                                                                                             | Morphological                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Complaints</li> <li>2. Anamnesis</li> <li>3. Objective examination</li> <li>4. Examination of the function of the gland</li> </ol> | <ol style="list-style-type: none"> <li>1. Radiography</li> <li>2. Sialography</li> <li>3. ULTRASOUND</li> <li>4. Radioisotope diagnostics</li> </ol> | <ol style="list-style-type: none"> <li>1. Puncture biopsy</li> <li>2. Incisional biopsy</li> </ol> |

## Treatment

| Inflammatory                                                                                                                                                                                                                                                                      | Dystrophic                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Surgical:</p> <ol style="list-style-type: none"> <li>1. Opening the infiltrate</li> <li>2. Removal of the gland</li> </ol> <p>Conservative:</p> <ol style="list-style-type: none"> <li>1. Washing the gland</li> <li>2. Anti-inflammatory</li> <li>3. Antihistamine</li> </ol> | <p>Surgical:</p> <p>Removal of the gland</p> <p>Conservative:</p> <ol style="list-style-type: none"> <li>1. Hormonal</li> <li>2. Stimulating</li> <li>3. Salivary</li> </ol> |

**Topic:**

# **SALIVARY STONE DISEASE**

## **RELEVANCE OF THE TOPIC**

Salivary stone disease accounts for 40% to 60% of all diseases of the salivary glands. This obliges doctors to thoroughly study all aspects of this disease. The disease occurs 3 times more often in urban residents than in the rural population. Men get sick 1.5 times more often than women, the submandibular salivary gland and its excretory duct are most often affected, submandibular glands and ducts are affected in 90% of patients, sublingual - in 7.5%, parotid - in 3% of patients.

## **THE GENERAL PURPOSE OF THE LESSON**

Be able to recognize the clinical signs of salivary stone disease, draw up a scheme of examination and treatment of patients with this pathology.

## **TO REALIZE THE OVERALL GOAL OF THE LESSON, YOU NEED TO BE ABLE TO**

| Specific goals                                                                                                                                                                                                      | Goals of the initial level of knowledge                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Recognize the clinical symptoms of salivary stone disease.                                                                                                                                                       | 1. Interpret the anatomy and physiology of the salivary glands (Department of Anatomy, Department of Topographic Anatomy and Operative Surgery, Department of Physiology).                                                                                                                                                                                                                   |
| 2. Draw up and justify a plan of examination of a patient with salivary stone disease.                                                                                                                              | 2. Evaluate and interpret the data obtained during the collection of complaints, anamnesis and assessment of the general and local status of the patient, data from clinical, biochemical and radiological studies (Department of Propaedeutics of Internal Diseases, Department of Biochemistry, Department of Radiology, Department of General Surgery, Department of Surgical Dentistry). |
| 3. To draw up and justify a plan of general and local treatment of patients with salivary stone disease, to determine indications and contraindications to surgical methods of treatment of salivary stone disease. | 3. Interpret the pharmacological characteristics of drugs used for local and general treatment of inflammatory surgical dentistry).processes (Department of Pharmacology, Department                                                                                                                                                                                                         |

## **TASKS FOR SELF-CONTROL AND SELF-CORRECTION**

### **THE INITIAL LEVEL OF KNOWLEDGE**

#### **Task 1.**

Specify the source of parasympathetic innervation of the submandibular and sublingual salivary glands.

1. Lingual nerve 3 branches of the trigeminal nerve.
2. The auditory string of the facial nerve.
3. Ear-temporal nerve 3 branches of the trigeminal nerve.
4. Buccal nerve 3 branches of the trigeminal nerve.
5. Vagus nerve

#### **Task 2.**

Specify which of the listed drugs can be used to stimulate salivation.

1. Pilocarpine hydrochloride
2. Atropine hydrochloride
3. Platyphylline hydrotartrate
4. Mezatol
5. Izadrin

#### **Task 3.**

Which of the following methods of examination is the most informative in the study of the condition of the submandibular salivary gland?

1. Bimanual palpation
2. Palpation
3. Comparative palpation
4. Auscultation
5. Inspection

#### **Task 4**

Which of the methods of radiography allows you to optimally display the condition of the soft tissues of the bottom of the mouth?

1. Radiography by V.S. Kovalenko
2. Radiography of the lower jaw in lateral projection
3. Orthopantomography
4. Overview radiography in direct projection
5. Teleroentgenography

#### **Task 5**

What factors influence the occurrence of stones in the human body?

1. Metabolic disorders
2. Inflammatory process in the body
3. Stagnation of the secret
4. Increased mineral content
5. All the listed factors

Correct answers to tasks: 1-2, 3-1.

If the student finds that he is not ready to solve one or more tasks, he must replenish his initial level of knowledge from the relevant sources of information.

After checking the initial level of knowledge, you can begin an in-depth study of this topic.

### **TRAINING CONTENT:**

#### **THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO CARRY OUT TARGETED ACTIVITIES**

1. Etiology, pathogenesis, classification of salivary stone disease.
2. Clinical picture of salivary stone disease.
3. Principles and methods of clinical and laboratory diagnostics of salivary stone disease.
4. Principles of surgical and medical treatment of salivary stone disease. Outcomes and prevention of complications of salivary stone disease.

Relevant information will help you master these questions.

### **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION THE TOPIC UNDER STUDY**

Task 1.

A patient with complaints of pain and swelling in the left submandibular region turned to the dentist for an appointment. After a clinical and X-ray examination, the doctor diagnosed Calculous sialoadenitis of the left submandibular salivary gland. Specify what factors contribute to the formation of stones in the large salivary glands?

1. Exposure of the mouth of the excretory duct to traumatic effects.
2. The upward flow of saliva in the duct.
3. The mucous nature of the secret of the submandibular gland.
4. Convoluted course of the excretory duct.
5. All the listed factors.

## Task 2.

A patient came to the doctor with complaints of a feeling of bursting and pain in the right submandibular region, radiating into the ear, temple, throat, intensifying when eating. The configuration of the face is somewhat disturbed due to the swelling of soft tissues in this area. During palpation, a dense painful formation of a rounded shape, 3x4 cm in size, with clear boundaries is determined. The opening of the mouth is free, the excretory duct of the right submandibular salivary gland is dilated. Specify the most likely diagnosis.

1. Acute sialodochitis
2. Acute sialoadenitis
3. Salivary stone disease
4. Submandibular lymphadenitis
5. Phlegmon of the submandibular space.

## Task 3.

After examining the patient, the dental surgeon suggested calculous sialoadenitis of the right parotid salivary gland. In order to clarify the diagnosis, an additional examination is scheduled. Which method of additional research will be the most informative in this case?

1. Cytological.
2. Thermoviseography.
3. Radioisotope.
4. Biochemical analysis of saliva.
5. Radiological.

## Task 4.

Patient K., 45 years old, turned to a dental surgeon with complaints of pain in the right submandibular region, radiating into the ear, swelling that appears when eating. The pain occurs periodically for 6 months. After clinical and X-ray examination of the patient, the doctor diagnosed: Salivary stone disease of the right submandibular salivary gland with localization of the stone in the excretory duct of the gland. Choose a treatment tactic.

1. Removal of the concretion by dissecting the duct.
2. Washing the gland with trypsin.
3. Extirpation of the gland.
4. Bugirovanie duct.
5. Conservative treatment.

## Task 5.

A patient came to the doctor with complaints of pain in the left submandibular region associated with eating, which he noticed for the first time several years ago. The disease proceeded with periodic exacerbations. During examination: the left submandibular gland is enlarged, dense, a small amount of saliva is released from its excretory duct during massaging. Radiologically: a stone is determined in the thickness of the salivary gland up to 1.5 cm in diameter. Choose a treatment tactic.

1. Conservative treatment.
2. Removing the concretion.
3. Bugirovanie duct.
4. Extirpation of the gland.
5. Dissection of the duct, salivary diet.

Correct answers to tasks: 2-3, 5-4.

## **ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON**

At the beginning of the lesson, the initial level of students' knowledge on theoretical issues and test tasks is monitored to determine the initial level of knowledge.

After summing up the results of the initial knowledge control, classes continue in the clinical hall (outpatient surgery or hospital department), where, under the supervision of a teacher, students conduct a clinical examination of patients with salivary stone disease, draw up a plan for additional examination and treatment, discuss clinical and laboratory data. They take part in therapeutic and diagnostic manipulations. Solve clinical situational tasks on the topic of the lesson.

At the end of the lesson, the final test control of the assimilation of the studied topic is summed up. The actions of students during the curation of patients are analyzed. The result is summed up. A task is given for the next lesson.

## **TECHNOLOGICAL MAP OF THE PRACTICAL LESSON**

| Stages of practical training                              | Time in min. | Equipment                                                         | Venue                                                                   |
|-----------------------------------------------------------|--------------|-------------------------------------------------------------------|-------------------------------------------------------------------------|
| Checking the initial level of students' knowledge         | 20           | A set of test tasks to control the initial level of knowledge     | Study room                                                              |
| Participation in the curation and clinical examination of | 155          | A tool for the examination and treatment of patients, situational | Consulting room, surgical office of the polyclinic, surgical and dental |

|                                                                                                                                                                                                                                         |    |                                                                                                      |                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------------------|-----------------------------|
| patients with salivary stone disease under the supervision of a teacher. Participation in carrying out therapeutic and diagnostic manipulations in patients with diseases of the salivary glands. Solving clinical situational problems |    | tasks, radiographs, laboratory examination data.<br><br>Graph of the logical structure of the topic. | department of the hospital. |
| Analysis and correction of the assimilation of the studied topic. Final test control.                                                                                                                                                   | 30 | Test tasks to control the assimilation of the topic                                                  | Study room                  |
| Summing up the lesson                                                                                                                                                                                                                   | 15 |                                                                                                      | Study room                  |

### **Recommended literature:**

#### **Main:**

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

#### **Additional:**

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.
3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007
4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

# GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC SECTION

## SALIVARY STONE DISEASE

|                                                       |
|-------------------------------------------------------|
| SYNONYMS:<br>Calculus sialoadenitis<br>Sialolithiasis |
|-------------------------------------------------------|

### Classification

| LUKOMSKY I.G. (1963)                                                                                                                                                                              | LESOVAYA N.D. (1955)                                                                                                                   | KRECHKO Y.V. (1973)                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>- Stones of the parotid salivary gland</li> <li>- Stones of the submandibular salivary gland</li> <li>- Stones of the sublingual salivary gland</li> </ul> | <ul style="list-style-type: none"> <li>- Calculous sialoadenitis</li> <li>- Calculous sialoadenitis</li> <li>- Mixed defeat</li> </ul> | <ul style="list-style-type: none"> <li>- Initial form</li> <li>- Clinically expressed form</li> <li>- Late form</li> </ul> |

### A.V. KLEMENTOV (1960)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>- Calculous sialoadenitis with localization of the stone in the duct of the gland (parotid, submandibular, sublingual)</li> <li>- Calculous sialoadenitis with localization of the stone in the tissues of the gland (parotid, submandibular, sublingual)</li> <li>- Calculous sialoadenitis with chronic inflammation of the large salivary glands after removal of the salivary stone surgically or its rejection from the tissues of the gland and duct</li> </ul> |
| <ul style="list-style-type: none"> <li>- without clinical manifestations</li> <li>- with chronic inflammation</li> <li>- with exacerbation of the chronic course</li> </ul>                                                                                                                                                                                                                                                                                                                                  |

### CLINIC

|               |                            |            |
|---------------|----------------------------|------------|
| Initial stage | Clinically expressed stage | Late stage |
|---------------|----------------------------|------------|

### Diagnostics

| Basic methods              | Additional methods               |
|----------------------------|----------------------------------|
| 1. Survey<br>2. Inspection | 1. Radiography<br>2. Sialography |

|              |                                                    |
|--------------|----------------------------------------------------|
| 3. Palpation | 3. ULTRASOUND<br>4. Biochemical analysis of saliva |
|--------------|----------------------------------------------------|

### Treatment

| Surgical                                                                                           | Conservative                                                                                                                               |
|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Removal of concretion from the duct<br>2. Extirpation of the gland<br>3. Crushing (lithotripsy) | 1. Anti-inflammatory<br>2. Stimulation of saliva secretion (medication)<br>3. The salivary diet<br>4. Gland massage<br>5. Physical therapy |

### OUTCOMES

|          |            |                        |
|----------|------------|------------------------|
| Recovery | Abscessing | Cirrhosis of the gland |
|----------|------------|------------------------|

### Topic:

## ARTHRITIS AND ARTHROSIS OF TEMPOROMANDIBULAR JOINT

### RELEVANCE OF THE TOPIC

Inflammatory-dystrophic diseases of the temporomandibular joint (TMJ) are quite common, 70-90% of people over 50 years old suffer from this disease. TMJ diseases are accompanied by symptoms, a violation of the function of chewing due to the developing contracture of the lower jaw. Complex anatomical and topographic relations of elements of the temporomandibular joint predetermine difficulties in the diagnosis of this disease. At the same time, effective treatment is possible only with a correct diagnosis. It is very important to choose the most rational ones from an extensive arsenal of medications, physiotherapy measures, and surgical interventions.

### COMMON GOAL

Be able to recognize clinical symptoms, justify and make a plan for diagnostic examination and treatment of patients with diseases of the temporomandibular joint.

### TO REALIZE THE GENERAL PURPOSE OF THE LESSON, YOU NEED

| Specific goals                                                                                                                                                                  | Goals of the initial level of knowledge                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Identify the etiological and pathogenetic factors that cause the development of diseases of the temporomandibular joint.                                                     | 1. Interpret the mechanisms of development of dystrophic and inflammatory processes (Department of Pathological Anatomy, Department of Pathological Physiology).                                                                                  |
| 2. On the basis of complaints, anamnesis and objective examination, identify the clinical symptoms of arthritis, arthrosis, arthritis-arthrosis of the temporomandibular joint. | 2. Interpret anatomical and topographic features of the temporomandibular joint, radiological symptoms of diseases of bones and joints (Department of Anatomy, Department of Topographic Anatomy and Operative Surgery, Department of Radiology). |
| 3. To draw up and justify a plan of examination of patients with diseases of the temporomandibular joint.                                                                       | 3. Conduct a clinical examination of a patient with pathology of the maxillofacial region (Department of Surgical Dentistry).                                                                                                                     |
| 4. To substantiate the tactics of treatment of patients with diseases of the temporomandibular joint.                                                                           | 4. Interpret the mechanism of action of medicinal and physiotherapeutic agents used in the treatment of inflammatory and dystrophic changes in the body (Department of Pharmacology, Department of Physiotherapy and Physical Therapy).           |

## **TASKS FOR SELF-CONTROL AND SELF-CORRECTION**

### **THE INITIAL LEVEL OF KNOWLEDGE**

Task 1.

Which of the following stages of examination of the patient is the first?

1. Collecting complaints.
2. The history of the disease.
3. Life story.
4. Objective examination of organs and systems.
5. Examination of the local status of the patient.

Task 2.

What anatomical elements does the temporomandibular joint consist of?

1. The head of the articular process.
2. Articular fossa – on the tympanic part of the temporal bone.

3. Articular tubercle, articular disc.
4. Joint capsule, joint ligaments.
5. Of all the above.

Task 3.

What are the characteristic changes in the blood during an acute purulent process?

1. Lymphocytosis.
2. Monocytopenia.
3. Eosinophilopenia.
4. Neutrophilic shift to the right.
5. Neutrophilic shift to the left.

Task 4.

What is the main type of metabolism disrupted in the body during the dystrophic process?

1. Lipid.
2. Carbohydrate.
3. Pigmented.
4. Mineral.
5. Protein.

Task 5.

What changes in the blood are observed in patients with rheumatism?

1. Neutrophilic leukocytosis and acceleration of ESR.
2. Hypergammaglobulinemia.
3. The appearance of C-reactive protein.
4. Positive reaction of Waaler-Rose.
5. All of the above.

Task 6.

Specify the radiological symptoms of diseases of bones and joints.

1. Osteoporosis.
2. Bone atrophy.
3. Osteolysis, destruction, osteonecrosis.
4. Osteosclerosis, exostosis, hyperostosis.
5. All of the above.

Task 7.

What pharmacological effect does indomethacin have, which is used in the treatment of inflammatory and dystrophic processes?

1. Painkillers.
2. Anti-inflammatory.
3. Anti-rheumatic.
4. Antipyretic.
5. All of the above actions.

Correct answers to tasks: 2-5, 4-5.

## **TRAINING CONTENT:**

### **THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO CARRY OUT TARGETED ACTIVITIES**

1. Etiology, pathogenesis of inflammatory and dystrophic diseases of the temporomandibular joint.
2. Classification, clinical manifestations, diagnostic methods and principles of treatment of arthritis of the temporomandibular joint.
3. Classification, clinical manifestations, diagnostic methods and principles of treatment of osteoarthritis of the temporomandibular joint.
4. Classification, clinical manifestations, diagnostic methods and principles of treatment of arthritis-arthrosis of the temporomandibular joint.

## **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION**

### **THE TOPIC UNDER STUDY**

#### **Task 1.**

Patient S., 50 years old, fell off his bike and hit his chin on the ground. I didn't lose consciousness. I went to the emergency room with complaints of pain in the lower jaw, painful opening of the mouth, inability to chew food. From the history of life, it was revealed that he often suffers from sore throats and acute respiratory infections, there are no chewing teeth. Objectively: there are abrasions on the skin of the chin, the mouth is half open, the movement of the jaw is painful, and when pressing on the chin, the pain increases in the area of the joints, swelling is determined in the area of the temporomandibular joints, and the heads of the joints are palpated in the articular pits, their movements are preserved, synchronous, but painful. The doctor suggested acute bilateral traumatic arthritis of the temporomandibular joints. What etiopathogenetic factor confirms this diagnosis?

1. Frequent angina disease.
2. Frequent ARVI disease.
3. Lack of chewing teeth.

4. Often sore throat and lack of chewing teeth.

5. Hitting the ground with your chin.

#### Task 2.

Patient G., 45 years old, complains of pain in the temporomandibular joint, inability to chew food. The pain appeared two weeks after the flu. The same pains occurred in the right elbow joint. The swelling of tissues and hyperemia of the skin in the area of the right temporomandibular joint is determined. Palpation in front of the tragus of the right ear and through the external auditory canal, which is narrowed, is painful. Pressing on the chin increases joint pain. Mouth opening is limited. Palpation of the right elbow joint is painful. Body temperature 37.4 °C. There are no changes from the internal organs. Rheumatological tests are negative, moderate leukocytosis, ESR - 30 mm/h. On the X-ray of the right temporomandibular joint, the articular gap is slightly expanded. The doctor assumes rheumatoid arthritis of the right temporomandibular and right elbow joints. What clinical symptoms confirm this diagnosis?

1. Pain in the area of two joints.

2. Swelling of paraarticular tissues.

3. Pain during palpation of the joint and intensifying when pressing on the chin.

4. Subfebrile temperature, increased ESR, moderate leukocytosis, negative rheumatological tests.

5. All of the above.

#### Task 3.

Patient S., 58 years old, complains of constant aching pains in the lower jaw, which increase when chewing, restriction of mouth opening, stiffness in the joint, especially in the morning, by the evening this stiffness decreases. He has been ill for about 1.5 years, when pain appeared in the area of the left temporomandibular joint, and then the crunch, which constantly intensified, the chewing teeth on the lower jaw on the right were removed a long time ago. Objectively: the mouth opens somewhat limited, the jaw shifts to the left when opening the mouth, there are no molars on the lower jaw on the right, palpation of the left temporomandibular joint is painful, while crunching is determined. The doctor diagnosed arthrosis of the left temporomandibular joint. What clinical data confirm the diagnosis?

1. Aching constant pain in the area of the left temporomandibular joint.

2. Stiffness in the joint, especially in the morning.

3. Restriction of mouth opening, strong crunch in the joint.

4. The duration of the disease that appeared after tooth extraction.

5. All of the above.

#### Task 4.

Patient K., 50 years old, turned to a dental surgeon about rheumatoid arthritis of the left temporomandibular joint. What examination methods should be used to make a diagnosis?

1. Survey: complaints, anamnesis of the disease.
2. Examination, functional analysis of the dental system: bite assessment, analysis of articular noise, etc.
3. Blood test for reactive protein, specific Waaler-Rose reaction.
4. Radiography of the temporomandibular joint.
5. All of the above.

#### Task 5.

Patient Z., 48 years old, complains of moderate pain and crunching in the temporomandibular joint in the morning and at the end of the day. For the first time I felt pain and crunch two years ago, after hypothermia, I did not go to the doctors. As a child, he had right-sided otitis media. Objectively: the general condition is satisfactory, from the internal organs without features, the face is symmetrical, the opening of the mouth is somewhat limited, with palpation near the tragus of the ear and through the external auditory passages, soreness and crunch in the joints. Radiologically, there is a deformation - narrowing of the articular gaps in the posterior sections. What kind of disease can you think about?

1. Acute arthritis of the temporomandibular joint.
2. Osteoarthritis of the temporomandibular joint.
3. Exacerbation of chronic arthritis of the temporomandibular joints.
4. Secondary arthritis of the temporomandibular joint on the right.
5. Chronic arthritis of the temporomandibular joints.

#### Task 6.

Patient N., 37 years old, complains of severe pain in the area of the temporomandibular joints and elbow joint, pain in the heart area. He has been ill for five years. Periodically, the condition improves (after treatment). As a child, he often had sore throat. Objectively: the condition is satisfactory, the body temperature is 37.4 °C. Blood pressure 100/80 mmHg, pulse 90 beats. in min., weak filling. During auscultation of the heart, systolic noise is heard at the apex. Locally, the swelling of the tissues in the area of the temporomandibular joints is determined. Opening the mouth is limited painful, chewing food is impossible. The tension of the masticatory muscles is palpated. Radiologically, narrowing of the articular gaps of the TMJ (damage to the cartilage tissue of the joints) was established. The doctor diagnosed chronic rheumatic arthritis. Choose the tactics of treating this patient.

1. Immobilization of the joint (circular sling bandage for 12 days).
2. Non-narcotic analgesics, antihistamines (indomethacin, brufen for 10 days).
3. Warming compresses for the night with bischofite, ronidase.

4. Physiotherapy: UHF, electrophoresis with bee venom, medical bile, hydrocortisone.
5. All of the above treatments.

Correct answers to tasks: 1-5, 6-5.

## **ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON**

At the beginning, the initial level of students' knowledge is monitored.

After the control of the initial knowledge and their correction, the lesson continues in the clinical hall (hospital department), in the emergency room, where students take part (together with the teacher) in the reception or supervision of patients. During the curation of thematic patients, attention is paid to the importance of the correct collection of anamnesis and the nature of the patient's complaints. Under the supervision of a teacher, students conduct an examination of the patient, identify the main symptoms and prescribe additional methods of examination. The teacher presents the data of the clinical examination of the patient, the students evaluate them, in particular, describe the X-ray picture of the disease of the temporomandibular joint. They express an opinion about the diagnosis. Make a treatment plan. The teacher fixes the splint on the teeth of the upper or lower jaw, focusing on each stage of the operation. They make up a medical treatment plan. Students solve problems in connection with the clinical situation.

At the end of the lesson, the final test control of the assimilation of the studied topic is summed up. The actions of students during the curation of patients are analyzed. The result is summed up. A task is given for the next lesson.

## **TECHNOLOGICAL MAP OF THE PRACTICAL LESSON**

| Stages of practical training                                                                                                                      | Time in min. | Equipment                                                                                                                                                            | Venue                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Checking the initial level of students' knowledge                                                                                                 | 20           | A set of test tasks to control the initial level of knowledge                                                                                                        | Study room                                        |
| Under the supervision of a teacher, students take part in the examination and admission of patients in a polyclinic, hospital, or emergency room. | 155          | A set for examination of patients, tables, slides, models, upper and lower jaws. A set of radiographs, data from clinical and laboratory studies. Situational tasks. | Polyclinic, hospital, emergency room, study room. |

|                                                                                       |    |                                                     |            |
|---------------------------------------------------------------------------------------|----|-----------------------------------------------------|------------|
| Solving clinical situational problems.                                                |    | Graph of the logical structure of the topic.        |            |
| Analysis and correction of the assimilation of the studied topic. Final test control. | 30 | Test tasks to control the assimilation of the topic | Study room |
| Summing up the lesson                                                                 | 15 |                                                     | Study room |

### **Recommended literature:**

Main:

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

Additional:

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.
3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007
4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

## **GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC ARTHRITIS AND ARTHROSIS OF TEMPOROMANDIBULAR JOINT**

### **CLASSIFICATION OF TMJ DISEASES**

| Inflammatory diseases                                    | Dystrophic diseases                      | Inflammatory and dystrophic diseases |
|----------------------------------------------------------|------------------------------------------|--------------------------------------|
| Arthritis<br>Acute Chronic<br>- traumatic<br>- rheumatic | Arthrosis<br>- sclerosing<br>- deforming | Arthritis-arthrosis                  |

|              |  |  |
|--------------|--|--|
| - rheumatoid |  |  |
|--------------|--|--|

### CLINIC

| Sharp                                                                                                                                                                                                                   | Chronic                                                                                                                                                                                                                                                               | Arthrosis                                                                                                                                                                                                                                                                 | Arthritis-arthrosis                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>- sharp start</li> <li>- pain that increases with the movement of the jaw</li> <li>- irradiation of pain in the face</li> <li>- infiltration of paraarticular tissues</li> </ul> | <ul style="list-style-type: none"> <li>- pain during movement n/h</li> <li>- tight mobility in the joint in the morning and at the end of the day</li> <li>- crunch in the joint</li> <li>- on Ro: osteoporosis and bone destruction of articular elements</li> </ul> | <ul style="list-style-type: none"> <li>- dull, aching pains</li> <li>- tight mobility and stiffness</li> <li>- crunch in the joint</li> <li>- hearing loss</li> <li>- on Ro: bone destruction, osteophytes and hyperostosis of the articular head and tubercle</li> </ul> | <ul style="list-style-type: none"> <li>- joint pain</li> <li>- limited mouth opening</li> <li>- tight mobility</li> <li>- hearing loss</li> <li>- on Ro: resorption of the head, deformation of the articular tubercle</li> </ul> |

### Diagnostics

| Clinical                                                                                                         | Clinical and laboratory                                                           |
|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Survey, examination, palpation, assessment of bite and occlusion of dentition, determination of pain sensitivity | Blood, urine, rheumatoid tests, joint puncture, EMG, radiography, CT of the joint |

### Treatment

| Acute arthritis                                                                                                                   | Chronic arthritis                                                                                                                 | Arthritis, arthritis-arthrosis                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>- Conservative treatment</li> <li>- Physiotherapy</li> <li>- Surgical treatment</li> </ul> | <ul style="list-style-type: none"> <li>- Conservative treatment</li> <li>- Physiotherapy</li> <li>- Surgical treatment</li> </ul> | <ul style="list-style-type: none"> <li>- Conservative treatment</li> <li>- Physiotherapy</li> <li>- Surgical treatment</li> </ul> |

### Topic:

**COMPLICATIONS OF INFLAMMATORY DISEASES OF THE MAXILLOFACIAL REGION: ODONTOGENIC SEPSIS, MEDIASTINITIS, THROMBOPHLEBITIS OF THE FACIAL VEINS, THROMBOSIS OF THE CAVERNOUS SINUS OF THE DURA MATER**

## RELEVANCE OF THE TOPIC

Inflammatory processes of the maxillofacial region can cause life-threatening complications of the patient: sepsis, mediastinitis, thrombophlebitis of the facial veins, sinus-thrombosis of the cavernous sinus of the dura mater. These complications account for up to 5.5-6.5% in relation to the number of patients with acute odontogenic infection.

Septic conditions are based on a systemic inflammatory response. Molecular reactions, which under normal conditions are evaluated as adaptation reactions, are activated and become damaging in sepsis. Some of these active molecules can be released on the endothelial membrane, which is one of the causes of endothelial damage, and leads to organ dysfunction. The first target organ in sepsis is the lungs, then the liver and kidneys. The defeat of these organs is the syndrome of multiple organ failure.

Odontogenic mediastinitis, thrombophlebitis of the facial veins, sinus-thrombosis of the cavernous sinus of the dura mater develop against the background of sepsis. Mortality according to various authors in sepsis ranges from 35 to 69%, mediastinitis - 30-50-70%, thrombosis of the cavernous sinus of the dura mater - up to 62%.

With the earliest diagnosis using computerized diagnostic programs and developed algorithms for identifying the main forms of severe complications based on more than 100 clinical and laboratory parameters in each patient, and the most advanced treatment method, including correction of impaired homeostasis, targeted antibacterial therapy in the preoperative, surgical and postoperative periods, optimal anesthesia and surgical intervention in some clinics have managed to reduce the mortality rate in sepsis to 16.5%, with thrombophlebitis of the cavernous sinus - up to 32%.

Therefore, timely recognition of clinical manifestations and early initiation of complex treatment of complications is a determining factor for the possibility of saving the patient's life.

## THE GENERAL PURPOSE OF THE LESSON

Be able to recognize the clinical symptoms of acute odontogenic sepsis, mediastinitis, thrombophlebitis of the facial veins, thrombosis of the cavernous sinus of the dura mater; determine the tactics of management of patients with these diseases and measures to prevent them.

## TO REALIZE THE OVERALL GOAL OF THE LESSON, YOU NEED TO BE ABLE TO

| Specific goals                                                              | Goals of the initial level of knowledge                              |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------|
| 1. On the basis of complaints, anamnesis and clinical examination, identify | 1. Evaluate and interpret the data obtained during the collection of |

|                                                                                                                                                                                                     |                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| symptoms; acute odontogenic sepsis, mediastinitis, phlebitis in the facial vein system, thrombosis of the cavernous sinus of the dura mater.                                                        | complaints, assessment of the general condition of patients with inflammatory processes (Department of General Surgery, Department of Propaedeutics of Internal Diseases, Department of Surgical Dentistry).                    |
| 2. To draw up and justify a plan of examination of patients with acute odontogenic sepsis, mediastinitis, phlebitis in the facial vein system, thrombosis of the cavernous sinus of the dura mater. | 2. To interpret the pathogenesis of acute sepsis, septic shock (Department of Pathological Physiology).                                                                                                                         |
| 3. Navigate the principles of intensive care in acute sepsis, mediastinitis.                                                                                                                        | 3. Interpret the pharmacological characteristics of antibacterial, detoxifying, immunocorregulating drugs, drugs that reduce thrombosis (Department of Pharmacology).                                                           |
| 4. To be guided by the principles of general and local treatment of thrombophlebitis in the facial vein system and thrombosis of the cavernous sinus of the dura mater                              | 4. To interpret the anastomotic connections of the venous system of the facial vein and the deep area of the face with the cavernous sinus of the dura mater (Department of Normal Anatomy, Department of Topographic Anatomy). |
| 5. Draw up and justify a plan of preventive measures to prevent odontogenic sepsis, mediastinitis, phlebitis in the facial vein system and thrombosis of the cavernous sinus of the dura mater.     | 5. Interpret the principles of prevention of complications of inflammatory diseases (Department of Propaedeutics of Internal Diseases, Department of General Surgery).                                                          |

## TASKS FOR SELF-CONTROL AND SELF-CORRECTION

### THE INITIAL LEVEL OF KNOWLEDGE

#### Task 1.

Patient B., 28 years old, was admitted to the maxillofacial department with complaints of a high temperature (39 degrees), weakness, pain when swallowing, difficulty breathing in the supine position. He has been ill for a week when there was pain in the destroyed 38 tooth. The pain was growing rapidly. The next day there was a "swelling" of the jaw in the area of the 38th tooth, the condition deteriorated sharply. I did not seek medical help. When breathing became difficult, she called an ambulance and was taken to the maxillofacial department. On examination, the patient is pale, the temperature is 39.5 ° C. Facial asymmetry due to inflammatory edema and infiltration in the body area and the angle of the lower jaw on the left. The

jaw in this area is muff-like thickened. Mouth opening up to 1.5 cm. 36, 37 and 38 teeth are movable. Pus is released from under the circular ligaments of these teeth. The transitional fold is smoothed on both sides. The side wall of the pharynx (left) bulges out. Palpation medial to the left corner of the lower jaw causes sharp pain. Which of the proposed diagnoses is most likely?

1. Acute odontogenic osteomyelitis of the lower jaw on the left, phlegmon of the submandibular triangle.
2. Acute odontogenic osteomyelitis of the lower jaw from the 38th tooth, phlegmon of the near-pharyngeal space.
3. Exacerbation of chronic osteomyelitis of the mandible, phlegmon of the pterygoid-mandibular space.
4. Exacerbation of chronic osteomyelitis of the mandible, phlegmon of the submasseterial space.
5. Acute odontogenic osteomyelitis of the lower jaw from the 38th tooth, phlegmon of the day of the oral cavity.

Task 2.

With phlebitis and thrombophlebitis of any localization, it is necessary to prevent intravascular coagulation of blood. Which of the following tools will you choose to solve this problem?

1. Fibrinogen.
2. Thrombin.
3. Heparin.
4. Protamine sulfate.
5. Medical gelatin

Task 3.

What cellular layer connects the fiber of the bottom of the oral cavity with the anterior mediastinum?

1. Pre-, paralaryngeal, pre-, paratracheal fiber.
2. Fiber around the internal jugular vein.
3. Fiber between the trachea and esophagus.
4. Fiber along the prevertebral fascia.
5. Fiber around the thyroid gland.

Task 4.

By which cellular layer does the pharyngeal space communicate with the posterior mediastinum?

1. Pre-, paralaryngeal, pre -, paratracheal fiber.
2. Fiber around the internal jugular vein.

3. Fiber between the trachea and esophagus.
4. Fiber along the prevertebral fascia.
5. Fiber around the thyroid gland.

Task 5.

What is the most probable way of communication of the upper lip with the cavernous sinus of the dura mater?

1. Vein of the upper lip - facial vein - angular vein - lower orbital - upper orbital veins.
2. The vein of the upper lip - the facial vein - the post-maxillary vein - the venous pterygoid plexus - the anastomotic vein between the venous pterygoid plexus and the cavernous sinus.
3. The vein of the upper lip - the facial vein - the post-maxillary vein - the venous pterygoid plexus - the venous plexus around the oval opening of the base of the skull.
4. Upper labial artery - facial artery - external carotid artery - ascending pharyngeal artery - posterior meningeal artery.
5. Upper labial artery - facial artery - orbital artery.

Correct answers to tasks: 3-1, 4-4.

If the student finds that he is not ready to solve one or more tasks, he must replenish his initial level of knowledge from the relevant sources of information.

After checking the initial level of knowledge, you can begin an in-depth study of this topic.

## **TRAINING CONTENT:**

### **THEORETICAL ISSUES ON THE BASIS OF WHICH IT IS POSSIBLE TO CARRY OUT TARGETED ACTIVITIES**

1. Clinical signs of acute odontogenic sepsis, mediastinitis, thrombophlebitis of facial veins, thrombosis of the cavernous sinus of the dura mater.
2. Ways of spreading the odontogenic inflammatory process from the maxillofacial region to the anterior and posterior mediastinum, as well as into the cranial cavity.
3. Methods of additional research for the diagnosis of acute odontogenic sepsis, mediastinitis, thrombophlebitis of facial veins, thrombosis of the cavernous sinus of the dura mater.
4. Principles of drug therapy of acute odontogenic sepsis, thrombosis of the cavernous sinus of the dura mater.
5. Prevention of complications of inflammatory diseases of the maxillofacial region.

Relevant information will help you master these questions.

## **TASKS FOR DETERMINING THE LEVEL OF ASSIMILATION**

### **THE TOPIC UNDER STUDY**

#### **Task 1.**

Patient I., 52 years old, was admitted to the clinic of maxillofacial surgery for odontogenic phlegmon of the submandibular fossa. The concomitant disease is diabetes mellitus. Despite the removal of the "causal" tooth, the opening of the phlegmon and the prescribed medication, the patient's condition worsened: aphasia, paralysis of the oculomotor muscles, atrophy of the optic nerve, paresis of the facial nerve appeared. What complication has the patient developed?

1. Sepsis.
2. Phlebitis of facial veins.
3. Sinus thrombosis.
4. Mediastinitis.
5. Brain abscess.

#### **Task 2.**

Patient K., 57 years old, was admitted to the maxillofacial department for odontogenic phlegmon of the bottom of the oral cavity. On the day of admission, the "causal" tooth was removed, the phlegmon was opened. However, the patient's condition worsened. Against the background of clinical manifestations of sepsis, symptoms of Ravich-Shcherbo, Rutenberg-Revutsky appeared. Choose the most informative additional study for diagnosis.

1. Examination of the fundus.
2. ECG.
3. EEG.
4. Chest X-ray.
5. Ultrasound of the neck organs.

#### **Task 3.**

Patient L., 53 years old, was admitted to the clinic for odontogenic phlegmon of the periaryngeal space on the left on the fifth day from the onset of the disease. On the day of admission, the phlegmon was opened. The "causal" tooth was removed at the polyclinic at the place of residence on the second day after the onset of the disease. Upon admission, the patient's condition is severe: temperature 40 ° C, pulse 140 beats / min, arrhythmic; shortness of breath – 45 respiratory movements per minute; swallowing is impossible, constant coughing. Positive symptoms of Ivanov, Popov, Gerke. After additional studies, anterior mediastinitis was established. What kind of fiber should be opened to drain the anterior superior mediastinum?

1. Pre-, paratracheal; around the neurovascular bundle of the neck.
2. Fiber around the neurovascular bundle of the neck, post-pharyngeal.

3. The fiber of the carotid triangle, the anterior pharyngeal space.
4. The fiber of the submandibular triangle, the posterior parotid space.
5. Fiber of the bottom of the oral cavity, the root of the tongue.

#### Task 4.

Patient M., 60 years old, was admitted to the clinic for odontogenic phlegmon of the bottom of the oral cavity. On the day of admission, the "causal" tooth was removed, the phlegmon was opened. Appropriate treatment has been prescribed. However, the patient's condition worsened: against the background of signs of acute sepsis, there was a throbbing pain in the chest, radiating into the interscapular region; symptoms of Riedenger, paravertebral Ravich-Shcherbo-Steinberg. After additional studies, posterior mediastinitis was established. What kind of fiber needs to be opened for drainage of the posterior upper mediastinum?

1. Pre-, paratracheal; around the neurovascular bundle of the neck.
2. Fiber around the neurovascular bundle of the neck, post-pharyngeal.
3. The fiber of the carotid triangle, the anterior pharyngeal space.
4. The fiber of the submandibular triangle, the posterior parotid space.
5. Fiber of the bottom of the oral cavity, the root of the tongue.

#### Task 5.

Patient N., 56 years old, was admitted to the clinic for acute odontogenic osteomyelitis of the lower jaw, phlegmon of the bottom of the oral cavity, anterior and posterior pharyngeal spaces. The "causal" tooth was removed, subcostal abscesses and phlegmons were opened. However, acute odontogenic infection was complicated by mediastinitis. The necessary surgical interventions have been carried out, adequate intensive therapy is being carried out. For what purpose in the course of treatment, blood tests are performed on the patient, diuresis, residual nitrogen, proteins and electrolytes of blood, liver functional tests are determined?

1. Maintaining homeostasis.
2. Determination of the effectiveness of detoxification therapy.
3. Control of the effectiveness of antibacterial therapy.
4. Correction of homeostasis.
5. Monitoring the effectiveness of desensitizing therapy.

#### Task 6.

Patient O., 23 years old, was admitted to the clinic with complaints of high body temperature, general weakness, profuse sweat, chills, pain in the right half of the face. The patient often suffers from colds. A week ago, 13 teeth got sick. I did not go to the doctor, there was swelling of the upper lip and the under-eye area. Applied thermal procedures. After that, the condition deteriorated sharply and the patient was taken to the clinic by ambulance. During the examination, attention is drawn to the sharp swelling and infiltration of tissues in the right subglacial region with spread to the

eyelids, upper lip, corner of the mouth, right cheek. Palpation of the infiltrate is sharply painful, the skin is hyperemic with a bluish tinge. Radially dilated subcutaneous veins diverge from the focus of inflammation. After carrying out additional research methods, thrombophlebitis was established in the system of the facial vein on the right. Choose from the suggested rational method of general treatment.

1. Antibacterial + detoxification + correction of CSF + nicotinic acid + heparin.
2. Antibacterial + detoxification + correction of CSF + protamine sulfate + fibrinogen
3. Antibacterial + detoxification + correction of CSF + thrombin + gelatin medical
4. Antibacterial + detoxification + correction of CSF + vikasol + thrombin
5. Antibacterial + detoxification + correction of CSF + thrombin + fibrinogen

Task 7.

Patient P., 58 years old, was admitted to the clinic for odontogenic phlegmon of the anterior pharyngeal space. The "causal" tooth was removed, the phlegmon was opened. A finger examination of the near-pharyngeal space revealed a defect of the shilodiaphragm. To prevent the development of mediastinitis, it is necessary to make an "advanced" incision. Specify its localization.

1. Submandibular triangle.
2. The post-maxillary area.
3. The sleepy triangle.
4. The posterior triangle of the neck.
5. Post-pharyngeal cellular space.

Correct answers to tasks: 3-1, 4-2.

## **ORGANIZATIONAL STRUCTURE OF THE PRACTICAL LESSON**

At the beginning of the practical lesson, control and correction of the initial level of knowledge of students on test tasks is carried out to determine the initial level of knowledge.

After summing up the results of the control of the initial knowledge and their correction, the lesson continues in the clinical hall (hospital department), where students take part (together with the teacher) in the reception or supervision of patients.

Students examine patients with inflammatory diseases of the maxillofacial region, pay attention to the localization of the inflammatory process, prompt access to the abscess, the prevalence of inflammatory processes and their possible complications.

Students palpatively examine the cellular spaces on the neck, through which the spread of acute odontogenic infection in the mediastinum is possible, as well as the superficial and deep area of the face, from where phlebitis of facial veins can spread into the cranial cavity. Students solve clinical situational problems.

At the end of the lesson, the final control and correction of the results of the assimilation of the studied topic is carried out with the help of test tasks. The result is carried out, the actions of students during the admission of patients are analyzed. A task is given for the next lesson.

### **TECHNOLOGICAL MAP OF THE PRACTICAL LESSON**

| Stages of practical training                                                                                                                                                                      | Time in min. | Equipment                                                                                                | Venue                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------|----------------------------------------|
| Checking the initial level of students' knowledge                                                                                                                                                 | 20           | A set of test tasks to control the initial level of knowledge                                            | Study room                             |
| Participation in the reception of patients. Examination of patients with inflammatory diseases of CHLO. Participation in carrying out bandages of patients. Solving clinical situational problems | 155          | Tools for examination of patients, situational tasks<br><br>Graph of the logical structure of the topic. | Surgical department, purulent dressing |
| Analysis and correction of the assimilation of the studied topic. Final test control.                                                                                                             | 30           | Test tasks to control the assimilation of the topic                                                      | Study room                             |
| Summing up the lesson                                                                                                                                                                             | 15           |                                                                                                          | Study room                             |

#### **Recommended literature:**

Main:

1. Dentistry. Textbook. N.N. Bazhanov. GEOTAR-Media, 2008.
2. Surgical dentistry. Textbook edited by T.G. Robustova. M. 2008
3. Surgical dentistry and maxillofacial surgery: national guidelines. Edited by A.A. Kulakov, T.G. Robustova, A.I. Nerobeev. GEOTAR-Media. 2010
4. Graph of the logical structure of the topic.

Additional:

1. Surgical dentistry. Textbook. Edited by V.V. Afanasyev. GEOTAR-Media. 2010
2. X-ray diagnostics in dentistry. M.M. Rasulov. Medical book. 2007.
3. Diseases, injuries and tumors of the maxillofacial region. Edited by A.K. Iordanishvili. St. Petersburg, SpecLit. 2007
4. Atlas of oral diseases. R.P. Langle. GEOTAR-Media. 2010.

**GRAPH OF THE LOGICAL STRUCTURE OF THE TOPIC**  
**COMPLICATIONS OF INFLAMMATORY DISEASES OF THE**  
**MAXILLOFACIAL REGION: ODONTOGENIC SEPSIS, MEDIASTINITIS,**  
**THROMBOPHLEBITIS OF THE FACIAL VEINS, THROMBOSIS OF THE**  
**CAVERNOUS SINUS OF THE DURA MATER**

**COMPLICATIONS OF INFLAMMATORY DISEASES OF MAXILLOFACIAL**  
**REGION, TREATMENT**

| Odontogenic<br>mediastinitis                                                                                                                                                                                                                                                                                                                                                                                                   | Acute odontogenic<br>sepsis                                                                                                                                                                                                                                                                                                                                                                | Phlebitis of facial<br>veins                                                                                                                                                                                                                                                                                                                                                                                                                 | Phlebitis of the<br>cavernous sinus of<br>the dura mater                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>- complaints, anamnesis, examination data, palpation</li><li>- symptoms of Gerke, Ivanov, Popov, Ravich-Shcherbo, etc.</li><li>- x-ray examination</li><li>---</li><li>1.Surgical</li><li>- methods of percutaneous mediastinotomy</li><li>2.Medication</li><li>- Antibacterial</li><li>- Detoxifying and hyposensitizing</li><li>- Specific and non-specific immunocorrection</li></ul> | <ul style="list-style-type: none"><li>1.Surgical</li><li>- elimination of foci of odontogenic infection</li><li>- autopsy of phlegmon, abscesses</li><li>2.Medication</li><li>- Antibacterial</li><li>- Detoxifying and hyposensitizing</li><li>- Specific and non-specific immunocorrection</li><li>- Correction of homeostasis disorders</li><li>- Cardiotonic and symptomatic</li></ul> | <ul style="list-style-type: none"><li>1.Surgical</li><li>- Ligation of the angular vein</li><li>- Dissection of purulent-inflammatory infiltrates</li><li>2.Medication</li><li>- Catheterization of the external carotid artery for the administration of antibiotics, anticoagulants</li><li>- Detoxifying and hyposensitizing</li><li>- Specific and non-specific immunocorrection</li><li>- Correction of homeostasis disorders</li></ul> | <ul style="list-style-type: none"><li>1.Surgical</li><li>- Rehabilitation of foci of odontogenic inflammation</li><li>2.Medication</li><li>- Catheterization of the common carotid artery for the administration of antibiotics, anticoagulants</li><li>- Detoxifying and hyposensitizing</li><li>- Specific and non-specific immunocorrection</li><li>- Correction of homeostasis disorders</li><li>- Cardiotonic and symptomatic</li></ul> |

|                                                                                                                             |  |                                                                               |  |
|-----------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------|--|
| <ul style="list-style-type: none"><li>- Correction of homeostasis disorders</li><li>- Cardiotonic and symptomatic</li></ul> |  | <ul style="list-style-type: none"><li>- Cardiotonic and symptomatic</li></ul> |  |
|-----------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------|--|