It is ratified
on meeting of chair
surgical stomatology
and maxillofacial surgery
with plastic and reconstructive
surgery of the head and neck
«28» August 2019
Protocol № 1 28.08.2019
The head of chair________ Avetikov D.S.

METHODICAL RECOMMENDATIONS
FOR INDIVIDUAL WORK OF STUDENTS
DURING PREPARATION TO PRACTICAL (SEMINAR) LESSON

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<th>Educational discipline</th>
<th>Surgical stomatology</th>
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<td>Module №</td>
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<td>Theme of the lesson №8</td>
<td>Lymphadenitis. Adenophlegmons. Abscesses of face, palate, alveololingual groove, hyoid area. Physical therapy in the treatment of inflammatory diseases of maxillofacial area. Phlegmons of submandibular, submental areas and pterygopalatine-mandibular space.</td>
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Poltava – 2019
1. ACTUALITY OF THEME.
Nowadays phlegmonous adenitis problem is very actual. Indeed, the lower the economic situation in the country the higher is the problem phlegmonous adenitis . It is not timely dental treatment at the dentist sooner or later lead to the development adenoflehmon. Also and wine are dentists resulting in phlegmonous adenitis . These problems are equivalent for both urban and rural areas.

2. CONCRETE AIMS:
2.1. To analyze, know the statistics, classification, characteristics of etiology and pathogenesis, clinical signs of inflammatory processes of the maxillofacial area.
2.2. To explain the diagnostic methods of surface odontogenic inflammatory processes of the maxillofacial area.
2.3. To suggest inspect a patient with superficial inflammatory odontogenic processes of maxillofacial area.
2.4. To classify the odontogenic inflammation of the submandibular area.
2.5. To explain the theoretical and clinical research on the problem of odontogenic submandibular phlegmonous adenitis.
2.6. Draw diagrams, graphs
2.7. To analyze treatment plan with odontogenic phlegmonous adenitis of submandibular area.
2.8. To create a plan evaluation and treatment of patients with odontogenic phlegmonous adenitis of submandibular area.

3. KNOWLEDGE, ABILITIES, SKILLS, WHICH ARE NECESSARY FOR STUDY THEMES (intradisciplinary integration)

<table>
<thead>
<tr>
<th>Names of previous disciplines</th>
<th>skills</th>
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<tbody>
<tr>
<td>1. Topographic Anatomy and Operative Surgery</td>
<td>Anatomic and topographic structure of maxillo-facial region, anatomy milk teeth and permanent</td>
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<td>2. Farmakology</td>
<td>Drugs used in the treatment of diseases of the teeth and mouth.</td>
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<td>3. Subjects provided</td>
<td>Causes, prevention and treatment of oral and communication with the general health of patient.</td>
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<td>4. Interdiscipline integration</td>
<td>The need of dental health dentists.</td>
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4. TASKS FOR INDIVIDUAL WORK DURING PREPARATION TO LESSON.
4.1. List of basic terms, parameters, characteristic, which a student must master at preparation to lesson:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td>1. Phlegmonous adenitis</td>
<td>This diffuse purulent inflammation which zahvatuye few anatomical spaces melt lymph node.</td>
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<tr>
<td>2. The fluctuation</td>
<td>The fluctuations in fluid inflammation.</td>
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<tr>
<td>3. Trismus</td>
<td>This muscle dysfunction in inflammatory process</td>
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4.2. Theoretical questions to lesson:
1. To know anatomy of maxillofacial area.
2. To know the anatomy of the submandibular triangle.
3. To know the location of submandibular lymph nodes.

4.3. The practical works (tasks) to be performed in class:
1. To be able to palpate the submandibular and cervical lymph nodes
2. To be able to palpate the submandibular salivary gland.
3. To be able to conduct bouginage duct submandibular salivary glands.
4. To be able to lead palpation sublingual areas with inflammatory processes

5. CONTENT OF THE TOPIC:
Acute serous lymphadenitis characterized by the appearance of pain and swelling of the lymph node or multiple nodes, sometimes significantly. The general condition is satisfactory, in some
Acute lymphadenitis resulting from the transition process in serous purulent or exacerbation of chronic. The disease is characterized by the appearance of pain in the affected lymph nodes, sometimes significantly. Overall health deteriorates, the body temperature rises to 37.5-38 °C. The examination is determined by the swelling of tissue under the affected lymph nodes. Palpable painful defined, limited, rounded infiltration, the skin over it hyperemic, edematous, gradually pressure welded with the lymph nodes. Due to the localization of inflammation in retropharyngeal, parotid lymph nodes painful swallowing, mouth opening is limited. In some patients with abscess formation occurs slowly and gradually, sometimes within 1-2 weeks. Not accompanied by distinct changes in general and local. The increase inflammation leads to a pronounced periadenitis. Infiltration increases in size, the skin on a larger pressure welded over with surrounding tissues, becoming purple in the center there is a softening of the cell (purulent limited periadenit). Acute purulent lymphadenitis and purulent limited periadenit differentiate from specific diseases of the lymph nodes, mainly from actinomycosis. In actinomycosis of lymph nodes characteristic slower disease. Helps diagnosis study of manure.

**Phlegmonous adenitis.** Phlegmonous adenitis developed as a result of purulent fusion of lymph nodes. When molten lymph node capsule manure enters the tissue that surrounds it. In phlegmonous adenitis occurs diffuse purulent inflammation of the lymph node tissue and surrounding yoho. Hvori complained of spontaneous, sometimes intense pain in the affected area, deterioration of general health. From history can reveal the presence of typical serous, purulent lymphadenitis or chronic symptoms - painful appearance "balls" or "nuts", which gradually increased. Phlegmonous adenitis characterized by a sharp increase inflammation: disturbed overall health, the body temperature rises to 38-38.5 °C and above, there are chills and other symptoms of intoxication. In some patients, phlegmonous adenitis developing slowly, the body temperature does not exceed 37.5-38 °C. The clinical picture of phlegmonous adenitis depends on the location and meets local clinical symptoms submandibular abscesses, chill triangles, neck and so on. In phlegmonous adenitis observed changes in blood: an increase in the number of white blood cells to 12-15 \( \times \) 10^9 / l, neutrophil leukocytes. ESR increases to 35-40 mm / hr. Phlegmonous adenitis should be differentiated from actinomycosis and tuberculosis. Last developing slowly mlyavishe, general and local symptoms are not as bright as in phlegmonous adenitis. With the opening of pus cells in actinomycosis discharge consistency in tuberculosis, it has the character of cheesy decay.

**Chronic lymphadenitis.** Chronic lymphadenitis is the result of an acute process in the lymph nodes. There are cases of chronic lymphadenitis with unexpressed acute stage. Many authors attribute this to the features of the microflora of weak virulence. Clinically distinguish chronic hyperplastic and chronic lymphadenitis, which escalated (purulent). The disease develops slowly, sometimes for 1-2 months and more. First, there is a painful ball or pea, which gradually increase and thicken. Palpable lymph node is defined round or oval, with clear contours, moving and not soldered to the surrounding tissues. Patients complain of availability of education, sometimes weakness, malaise. In chronic hyperplastic lymphadenitis general condition is satisfactory. Only some patients have fever up to 37-37.5 °C, especially in the evening, violation of general health. In some cases, as a result of chronic inflammation of lymph nodes is a significant overgrowth of granulation tissue which replaces the lymphoid tissue extends beyond the hub and sprouts to the skin, refining it. At the break of thinned plots formed fistulous course of protrusion of granulation. Chronic hyperplastic lymphadenitis may worsen. In such cases, the clinical symptoms of acute purulent lymphadenitis match. At high disease duration decrease the number of leukocytes (4-5 \( \times \) 10^9 / l), a slight increase in the number of lymphocytes and monocytes, increased erythrocyte sedimentation rate of 25-30 mm / hr. Often there are no changes in the blood. Chronic hyperplastic lymphadenitis should be differentiated from congenital cysts and fistulas of the face and neck, and a number of tumors. Congenital cysts of the face and neck are located under the first and second gill slits and curves, thyroid - language channel. They grow slowly for several years. Palpation
formation has an elastic consistency and painless. Puncture and cytology help diagnosis. Quite difficult differential diagnosis of chronic lymphadenitis and chronic granulating periodontitis. In both diseases on the face may remain fistulous passage. When lymphadenitis it leads to residual node translucent at Periodontitis - to the area under the periapical bone cell. Assist the differential diagnosis of dental radiography, morphological study. Differential diagnosis of chronic hyperplastic lymphadenitis and some tumors hemoblastoses, metastatic lesions based cytology punctate, data pathomorphological study material biopsy. Treatment. Acute lymphadenitis must first appropriate intervention in odontogenic source of infection (tooth extraction or disclosure of the apical foramen with periodontitis, treatment of dental alveoli tooth extraction with alveolitis, etc.) To prevent further flow of micro-organisms in the lymph nodes. Only in serious glandular treatment may be conservative. Showing physiotherapy. A good therapeutic effect is given warming bandage with ointment of iodide of potassium, as well as dressing in Dubrovin. Good results are observed at the puncture site during infiltration anaesthesia, with or trymekayinovoyu lidocain blockade when the tissue surrounding the cell inflammatory infiltrate trimecaine solution or lidocaine, sometimes with the addition of the antibiotic, Frc enzyme. In acute or chronic suppurative lymphadenitis with acute exacerbation of conduct surgical treatment - primary surgical treatment of purulent wounds cut according localization process (section ulcer), curettage of necrotic tissue, drug effects on cell inflammation. Scheme comprehensive treatment depends on the reactivity and symptoms of acute local or exacerbation of chronic lymphadenitis. Assign a tonic, stimulating, desensitizing treatment, immunotherapy. In debilitated patients, those older a course of antibiotics and sulfonamides. Do ligation, draining wound, hold her local treatment with drugs such as furan, enzymes, and other antistaphylococcal plasma, Bandage with drugs. Treatment of phlegmonous adenitis conducted according to the rules of treatment of phlegmon. Treatment of chronic lymphadenitis begin to eliminate sources of odontogenic infections. To speed up the resolution of the enlarged lymph node advisable to alternate trimecaine blockade or lidocaine with furatsillina, enzymes, with the imposition of ointment dressings. Physiotherapy (electrophoresis of iodide of potassium, enzymes Dimexidum) administered after puncture and cytological confirmation of diagnosis lymphadenitis. In cases of chronic lymphadenitis lasting, significant development of granulation in cell sprouting of the skin to form a fistulous lymph node removal is carried out together with fistulous course (nekrotoniya) and ushyvatut tissue layers. Complications observed in phlegmonous adenitis, especially the neck when developing common inflammatory disease. Weather in inflammation of the lymph nodes favorable. Only localization phlegmonous adenitis in the neck may represent a risk of infection in tissue around the neurovascular bundle and the subsequent conversion of the inflammatory process in the mediastinum. Prevention is dental health, upper respiratory tract, as well as increasing resistance antiinfectious body. Abscesses (abscesses) - an acute purulent inflammation of the tissue is limited. Abscesses palate (abscessus palati durum). If an abscess incision palate mucosa make it to the bone along the alveolar edge to prevent injury palatal and incisal artery. Absceses of jaw-lingval groove and sublingual space (abscessus sulci mandibulolingualis spatii sublingualis). This space is located on the second and third molar of the lower jaw between the lateral surface of the tongue and the inner surface of the body of the mandible. At the top is covered with mucous membrane. To prevent damage to lingual nerve and vessels held incision of the mucosa and submucosa at the level of the midline groove and the inner surface of the body of the mandible. In the course of the operation wound broaden and deep blunt instrument to the appearance of pus. Abscesses areas sublingual roller localized in tissue surrounding the hyoid salivary glands. Incision of abscesses when carried out in the interval between the edge of the mandible and hyoid salivary glands, in some cases – on

Phlegmon – acute diffuse purulent inflammation of the tissue (subcutaneous, intramuscular, which tends to further interpretations of diffusion. Surgical anatomy recognize such facial phlegmons: 1) jaws phlegmon; 2) phlegmon of the mouth floor; 3) the pharyngeal phlegmon 4) phlegmon of the tongue; 5) phlegmon of the neck. There are primary and secondary phlegmon. Primary occur in the maxillofacial area and rarely its reason cannot be explained. Secondary developing against the background of osteomyelitis called osteophlegmon. As a complication of
purulent lymphadenitis called phlegmonous adenitis. Phlegmonous adenitis develops as a result of melting of purulent lymph node.

**Phlegmon of submandibular area** often arises from the difficult eruption of the lower wisdom tooth, as well as complications of abscess, osteomyelitis, lymphadenitis.

**Topographic anatomy.** In the center of the submandibular triangle is submandibular salivary gland with surrounding lymph nodes, facial artery that passes, and the front face of the vein. The outer limit of the submandibular triangle is the lower edge of the body of the mandible. Two other sides of the front and rear limited-bellied m.digastricus bottom edge: skin, subcutaneous tissue of the m.platysma, and superficial piece own neck fascia.

**Clinic.** Pain when swallowing, skin folds are not taken. Palpation observed painful dense infiltrate. Opening the mouth restrictions may be marked trismus II–III levels. In the mouth a slight redness of the mucous membrane in the infiltrate area.

**Phlegmons of submental area** occurs as adenitis or phlegmon.

**Topographic anatomy.** Triangle field within the front left and right abdomen m.digastricus. The tops of the given triangle reaching the midline of its submental part. Top-side of the mouth is covered with submental m.milohioideus.

**Clinic.** The running of phlegmon is not hard. Increase in temperature, which has the form of infiltration spread toward the submandibular triangle and neck.

**Phlegmons of pterygoid-mandibular space** (phlegmonae spattii pterygoideomandibularis) may occur in the gap between the inner surface of the branches of the lower jaw and the outer surface of the medial pterygoid muscle (m.pterygoideus medialis). Wing jaw space border with the temporal and pterygopalatine holes, pharyngeal area and jaw space.

**Clinic.** Tryzm II –III, palpation and swallowing are painful. Palpation observed painful dense infiltrate.

**Treatment:** intraoral lesion length of 2 cm on the outside and slightly parallel wing-jaw fold (plica pterygomandibularis) toward the branches of the lower jaw. Immediately after the lesion is provided, bluntly penetrate the mucosa using forceps between the branches of the lower jaw and the internal pterygoid muscle in pterygoid-mandibular space where the abscess is located. In cases where the intraoral incision through may not be possible (persistent trismus masticatory muscles, presence of infiltration at an angle of mandible) it is necessary to make the extraoral cut. Start it with the angle of the mandible, bordering and bring to the front edge of the masticatory muscles. Cut the skin, subcutaneous tissue, fascia by using blunt instruments, go by a branch of the mandible, peeled internal pterygoid muscle and get into pterygoid-mandibular space.

6. MATERIALS FOR SELF-CONTROL:

**A. Questions for self-control:**
1. To be able to conduct differential diagnostics of illnesses Calculous sialoadenitis phlegmonous adenitis submandibular area.
2. To be able to inspect the site and hyoid jaw- language groove

**B. Tasks for self-control:**
1. The patient of ‘33 years complains formation in the right submandibular region, which appeared a month ago after undergoing a sore throat. Patient held anti-inflammatory therapy, but not tumor decreased. In the right submandibular area palpation turns slightly painful globular formation of tight elastic consistency with smooth contours not welded with skin. With duct of submandibular gland saliva secreted transparent. Sublingual roller unchanged. Which disease is responsible described the clinical picture.
   (Answer : Chronic submandibular lymphadenitis right side)
2. The patient S., ‘62 years, addressed to a dental surgeon with complaints of severe constant throbbing pain on the left under the tongue that extends to the ear and temple, pain when eating, zatrudnen open mouth, the overall poor stan. Sick for a week when from ” appeared sore tooth on the lower jaw to the left. After 2 days the body temperature rose to 38.9 °C, deteriorated general condition. On ” objectively : 37 Crown destroyed 2/3 of the tooth mobility degree, percussion it painless. In the area of jaw- lingual groove at level 36, 37 is determined by infiltration, mucous
membrane over it hyperemic, edematous, palpation - fluctuation. Congestion of the mucous membrane extends to the anterior palatal arch. Zev is not changed. Formulate the clinical diagnosis.

(Answer: abscess jaw-lingual groove on the left)

3. Female, 40 years old, appealed with complaints of swelling of the left submandibular area, which appeared 3 days ago, on fever 37.4 °. OBJECTIVE: to the left submaxillary area observed soft tissue swelling, skin color is not observed as changed. Palpation of node - tight elastic consistency, not very painful, mobile, round shape with a smooth surface, size 2.0 x 1.5 cm. Open your mouth free, oral mucosa without visible changes, 36 tooth crown destroyed by 2/3 of the percussion painful. Put diagnosis

(Answer: Odontogenic acute serous glandular submandibular area)

C. Materials for test control. Test tasks with the single right answer (a=II):
1. Tests of the unit the correct answer (α = II):
An abscess is:
A. diffuse purulent inflammation of the tissue;
B. inflammation of the lymph nodes;
C. purulent inflammation of the tissue;
D. acute inflammation of the muscles;
E. traumatic tissue swelling.
(Answer: C)
2. Adenoflemona this
A. diffuse purulent inflammation of the tissue melt lymph node;
B. inflammation of the lymph nodes;
C. purulent inflammation of the tissue;
D. acute inflammation of the muscles;
E. traumatic tissue swelling.
(Answer: A)
3. Adenoflemony treated
A. only conservative
B. only surgery
C. surgery and drug
D. Phyziotherapy treatment
E. later she goes without treatment
(Answer: C)