Department of Pediatric Surgical Dentistry

Regularities of the clinical course, diagnosis, differential diagnosis end complex treatment of inflammatory processes of soft tissues of the maxillofacial region.

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Lymphadenitis

- In children under 6 years of age, neodontogenic infections are more common, and in 7-12 years the role of odontogenic infections increases.
- ➢Seasonality in occurrence - mainly in spring and autumn.

- ➢In children more often than in adults, LA occurs for no apparent reason against the background of "visible health", but the inability to determine etiological factors indicates a "wrong methodological approach to diagnosing the disease", ie LA is always a secondary disease (Prof. V. В.Рогинский).

Classification of lymphadenitis (AV Vilkov, 1987)

A. By localization:

- ➢ isolated;
- ➢ regional (group);
- ➢ common;
- ➢ generalized.

B. By way of infection:

➢ odontogenic;

➢ neodontogenic (tonsillo-, oto-, stomato-, dermatogenic, etc.).

- B. By duration :

➢ acute:

- serous;
- purulent;

➢ chronic:

- purulent (destructive);
- hyperplastic;
- acute chronic.

- D. On the morphological structure of the lymph node in chronic lymphadenitis:

➢ hyperplastic (follicular);

➢ desquamative (sinus);

➢ mixed (hyperplastic-desquamative);

➢ productive (vascular).

Acute serous lymphadenitis

Provoking factors - acute and exacerbations of chronic pathological processes of the oropharynx and nasopharynx, SOPR and upper respiratory tract.

➢Serous stage in children under 5-6 years quickly turns into purulent (within a few hours, days).

Complaints: swelling and soreness of soft tissues, deterioration of sleep, appetite, fever up to 37-37.50C (but possibly no temperature reaction).

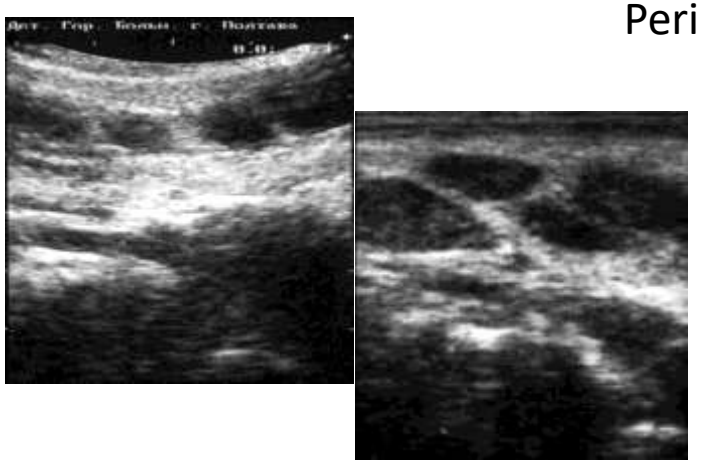
Objectively: swelling with a slight spread of edema to neighboring areas, skin color is not changed, it easily gathers into a fold. At localization in the parotid-masticatory area restriction of opening of a mouth and insignificant dryness of SOPR are possible.
Palpation: enlarged, mobile, sensitive, dense-elastic LU.




Children with acute serous odontogenic LA:
subchin, left buccal, left mandibular areas, lateral surface of the neck on the right

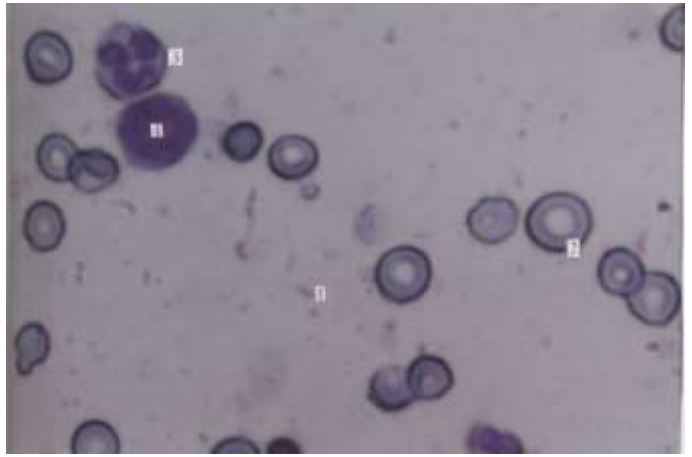
A child with an acute serous stomatogenic buccal LA on the left

Peripheral blood parameters and urine composition do not change.



Ultrasound: one or more oval cavities
formations with clear smooth contours, different sizes,hypoechoic structure with echo-compacted capsules

Cytological examination: a large number of neutrophils and lymphoid elements (lymphocytes, prolymphocytes and lymphoblasts). The number of macrophages, plasma cells and reticulocytes increases. A significant number of neutrophils with preserved structure and macrophages is an indicator of favorable disease development.



Outpatient treatment.

➢ Elimination of the cause of the disease.

➢ Compresses of 5% solution of dimexid with dissolved anti-inflammatory drugs.

➢ Semi-alcohol compresses and bandages with Vishnevsky ointment, Dubrovin bandages (the skin is lubricated with 4% yellow mercury ointment, napkins soaked in a saturated solution of potassium permanganate, wax paper, cotton wool and bandage are applied on top).

➢ Oral - hyposensitizing drugs 10-14 days, vitamin complexes up to 21-30 days.

➢ Immunocorrectors and adaptogens (Eleutherococcus, Chinese magnolia) can be prescribed.

➢ Physiotherapy: UHF in an athermic dose, microwave, hydrocortisone phonophoresis, helium-neon laser.

Antibiotics and sulfonamides should not be used in this phase of inflammation (unless otherwise indicated).

They contribute to the stabilization of pathological changes in the parenchyma of the LU at one level and its bagging, the lack of positive clinical dynamics. After their cancellation at 20-25% of patients in 3-5 days or later suppuration is observed, and in 40-45% of cases there is a chronicity of process.

➢ In the rehabilitation period (when acute inflammation is eliminated):

- electrophoresis with 5% potassium iodide №10-15;
- ozokerite applications №10;
- massage of the collar area and face to stimulate lymph flow and lymph flow;
- taking vitamin preparations for up to 21-30 days;
- hardening of the child.

Hirudotherapy

➢normalization and improvement of capillary blood flow;
➢ anticoagulation;
➢improvement of intracellular metabolism;
➢immunostimulation and immunomodulation;

Effects:

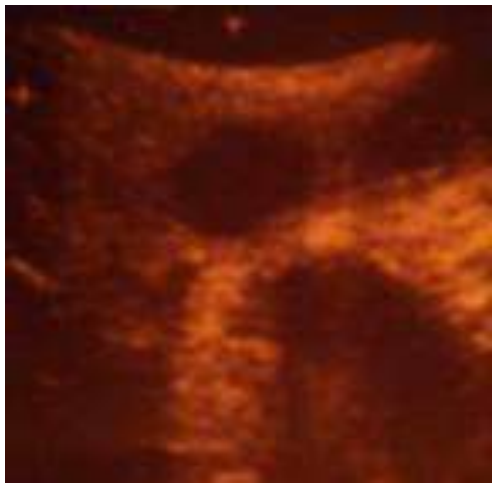
- pronounced anti-inflammatory;
- adaptogenic and anti-stress;
- antibacterial.

Aspiration method - applications of Hirudo medicinalis until their complete blood saturation:

- exposure - 20-40 minutes;
- course of treatment - 2-3 sessions with an interval of 1-2 days;
- 2-3 Hirudo medicinalis per session;
- after the procedure - aseptic dressing on the wound surface.

After a course of hirudotherapy observed:

- improvement of the general condition of patients;
- normalization of body temperature;
- reduction of swelling and collateral edema of the MT in the relevant area;
- disappearance of pain on palpation.



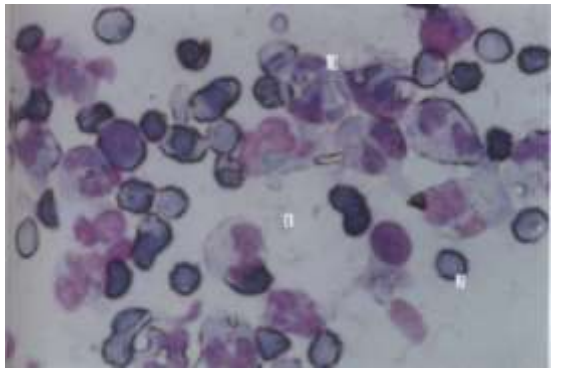
Acute purulent lymphadenitis

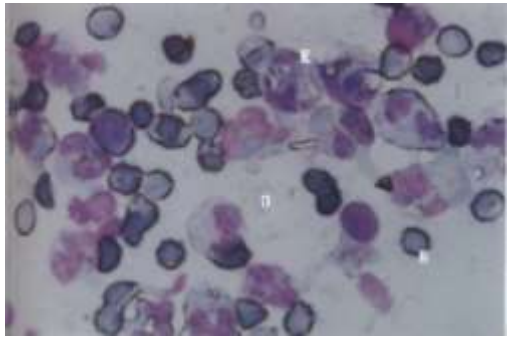
➢Most often occurs in spring and autumn.
➢In 3% of cases it occurs simultaneously in two anatomical areas.
Complaints: swelling and soreness of soft tissues, impaired sleep and appetite, chills and lethargy.
Objectively: body temperature - from 37.44 ± 0.64 ° C to 38.5 ± 0.13 ° C.
The skin is pale, tachycardia, moderate dryness SOPR.
Hyperemia of the skin over the purulent focus (55.81% of cases).
Fluctuation and collateral edema of the surrounding tissues (81.40% of patients).
In 39.54% of cases of mandibular and parotid LA - limited and painful mouth opening.

Cytological picture of exudate: detritus, a large number of erythrocytes and neutrophils of varying degrees of destruction, single lymphocytes and macrophages.

Microbiological study of exudate: golden and epidermal staphylococci, hemolytic and non-hemolytic streptococci in monoculture and associations in the amount of 107-109 per 1 ml of exudate with pronounced or moderate biological activity.

Ultrasound: enlarged lymph node, the presence of an anechoic structure (its structure is absent or uniformly hypoechoic)





In the peripheral blood - moderate leukocytosis and an increase in ESR to 17.5 ± 20.00 mm / h (61% of cases).

In the urine in 16.28% of cases - a small number of leukocytes, single erythrocytes, mucus and sometimes traces of protein. 4.65% of children have hyaline cylinders.

In the oral fluid - a significant decrease in the amount of S IgA and bactericidal activity of lysozyme.

Inpatient and complex treatment (surgical, medical and physiotherapy).
The skin is dissected taking into account the directions of natural folds and lines of "safe" incisions.









Stages of remediation of the source of inflammation:

- outflow of pus and removal of the disintegrated fragments of a parenchyma of LU;
- wound drainage;
- applying a bandage with a hypertonic solution of NaCl or 5% solution of dimexid.




➢Save the LU capsule as a natural barrier (except for the incision site).

➢AB therapy (per kg / body weight) in combination with antihistamines and vitamin drugs in age doses during the stay in the hospital.

➢In the area of inflammation: UHF, UFO, fluctuorization, magnetic therapy, helium-neon radiation.

Herzenberg's pseudoparotitis - only swelling of the skin of a normal color and limited opening of the mouth.

Palpation: dense, painful, limited mobile infiltration.

The symptom of "fluctuation" is in 43% of cases.

When massaging the parotid, a transparent secret is released, the amount of which is normal or slightly reduced.

When pus spreads outside the LN capsule, lymphogenous parotitis develops, for differential diagnosis of which cytological examination of secretion and sialography data are used (with lymphadenitis, an accumulation of a radiopaque substance in the form of an "ink spot" associated with the excretory ducts of the salivary gland is observed on the sialogram).

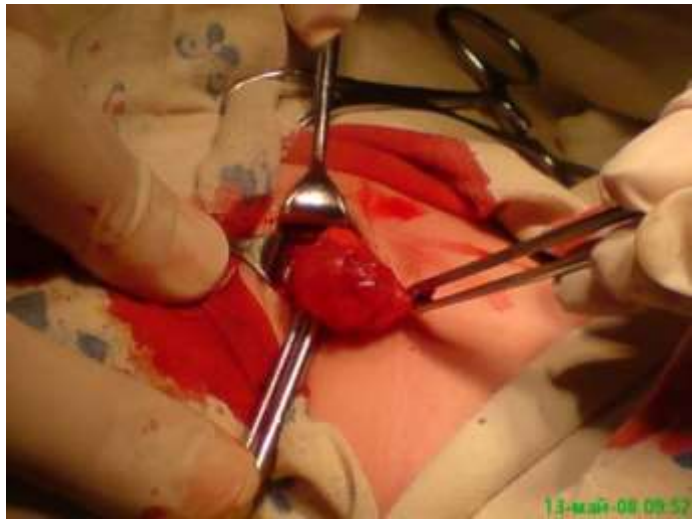
Chronic lymphadenitis

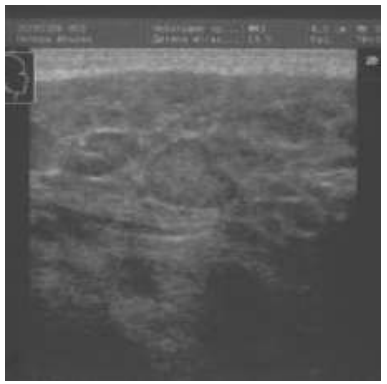
It occurs after acute CAP subsides, repeated infection with weakly virulent microorganisms, or the presence of chronic foci of infection against a background of decreased reactivity of the child's body.

Chronic hyperplastic lymphadenitis - without general reactions of the body (sometimes - increased fatigue, headache, increased body temperature to 37-37.3 ° C).
Objectively: an increase in the size of rounded, with clear contours, tightly elastic LUs, the skin above them is not changed and is collected in a fold. As the IP subsides, the LU decreases, without reaching the same size.

After 2-3 years, lymphoid tissue is replaced by connective tissue, the size of the LN is significantly reduced with the loss of physiological functions.

In peripheral blood, minor leukemia and relative leukocytosis are possible. **Urine** unchanged.
In punctate: mature lymphocytes, plasma cells, macrophages, multinucleated cells of foreign bodies, histioid elements. There are few neutrophils, but as the process progresses, their number increases.





Ultrasound:
increased size of the lymph node with a hyperechoic zone in the center, merging with the surrounding tissues

Chronic purulent lymphadenitis is a consequence of chronic hyperplastic LA: under the influence of exogenous and endogenous provoking factors, VP is activated, a microabscess is formed in the lymph node parenchyma and the connective tissue capsule thickens.

Objectively: 2 options:

➢a single enlarged, painful LU without the phenomena of periadenitis and deterioration of the general condition,

➢expressed symptoms of inflammation and deterioration of health: the node loses the clarity of the contours, there is swelling of the MT and a painful reaction, the skin turns red, poorly gathered in a fold.

- Fluctuation is almost always determined by palpation.
- Exacerbation may result in perforation of the skin to form a fistula.
- In peripheral blood leukocytosis, lymphocytosis, acceleration of ESR are possible, there are no changes in urine.

Treatment of chronic LA

identification and elimination of causal factors (background comorbidities, acute and chronic VP).

In hyperplastic LA: immunocorrection, vitamin therapy, hyposensitizing drugs and adaptogens, physiotherapy (electrophoresis of 5% potassium iodide and lidase №10, phonophoresis, ozokerite, UFO) and exercise therapy.

If conservative therapy does not give the desired success - lymph node extirpation.

CAT'S SCRATCH DISEASE

• The cause of the disease is a gram-negative bacterium from the group of chlamydia, detected in the lymph node.
• Carriers of the disease - cats.
• Entrance gate - damaged skin or CO.
• Incubation period - 5-45 days.

• General weakness, fever, swollen lymph nodes.
• In some cases - conjunctivitis, encephalopathy.
• In the peripheral blood - minor leukocytosis with neutrophilia, lymphocytosis and accelerated ESR.

• At the site of scratches: redness, in 3-5 days - a papule, and in 2-3 days - a vesicle: breaks through with formation of a crust after which rejection the scar remains.
• The reversal of skin changes occurs in several months.

• In 1-2 weeks after infection LU (more often inguinal, elbow, cervical and submandibular) increase, painful at a palpation, to 2 cm in the diameter. At abscessing - fluctuation.

The pathological basis of changes in LU is the formation of granulomas.

Abscesses and phlegmons

The peculiarity of phlegmon and abscesses of CHLO in children is the rapid formation of a purulent lesion (within 2-3 days) and a violent general reaction of the body.

- ➢Memibular abscesses and phlegmons are mainly odontogenic.
- ➢Abscesses develop more often than phlegmons.

Abscess is a limited cavity purulent lesion that results from the purulent melting of a piece of tissue or other tissue.

Odontogenic abscesses are most often localized in the maxillofacial groove, canine fossa, submandibular, buccal and parotid-masticatory areas.

Objectively: increase in body temperature (37.5-38.5ºC) and deterioration of the general condition (headache, vomiting, etc.). With slow-growing abscesses, especially superficial ones, the temperature may be normal.

Around the abscess - painful swelling, fever in the surrounding tissues, their compaction and redness. Later, the tissues soften and fluctuations appear, and the pain gradually decreases.

In peripheral blood: leukocytosis, acceleration of ESR, etc.

Phlegmon is an acute diffuse purulent inflammation of the tissue (subcutaneous, intermuscular, interfascial, etc.), prone to spread.

Spilled serous impregnation of tissue is replaced by the formation of purulent exudate with multiple foci of tissue necrosis. The process involves the nearest and most distant cellular spaces - there are diffuse purulent processes.

Significant general changes, and body temperature rises to 39-40ºC.

Local clinical symptoms of superficial phlegmon: diffuse painful infiltrate covered with tense, shiny, hyperemic skin that does not gather in a fold, very dense consistency ("woody phlegmon").
Soon there is a fluctuation in the central parts of the infiltrate, and around it - collateral edema, which does not allow to accurately determine the boundaries.

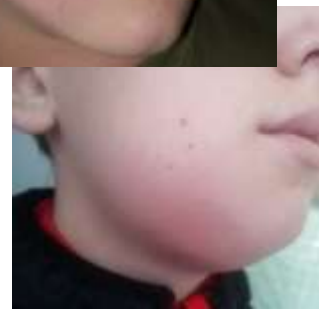
In peripheral blood:

- decrease in the content of hemoglobin and the number of erythrocytes;
- ESR - up to 50-60 mm / h;
- leukocytosis with average values of 15000-18000;
- eosinopenia or aneosinophilia;
- pronounced neutrophilia (in some cases 90% or more), with a shift of the leukocyte formula to the left; except for rod-shaped and young neutrophils in some cases up to 2-3% of myelocytes are observed.

In urine: albuminuria with a protein content of up to 2-3%, hematuria, hyaline and, less often, granular cylinders due to infectious-toxic kidney damage are possible.

Adenophlegmon - the result of a breakthrough of pus through the capsule of purulent LU. The skin usually does not shine, having the appearance of a lemon peel; and the temperature usually does not reach high numbers.

Osteophlegmon is a maxillary phlegmon that accompanies acute osteomyelitis of the jaw.



Complications of maxillary phlegmon:

- mediastinitis;
- purulent thrombophlebitis of the venous plexuses, large veins of the cerebrospinal fluid and neck, communicating with the cerebral sinuses;
- septicemia and septicemia.

At long existence of a phlegmon as a result of thrombangiitis, purulent melting of maxillary MT and disturbance of food of a site of a jaw, the adjoining site of a bone necrotizes - there is a secondary, usually cortical, osteomyelitis of a jaw.

Adenophlegmon - the result of a breakthrough of pus through the capsule of purulent LU. The skin usually does not shine in appearance

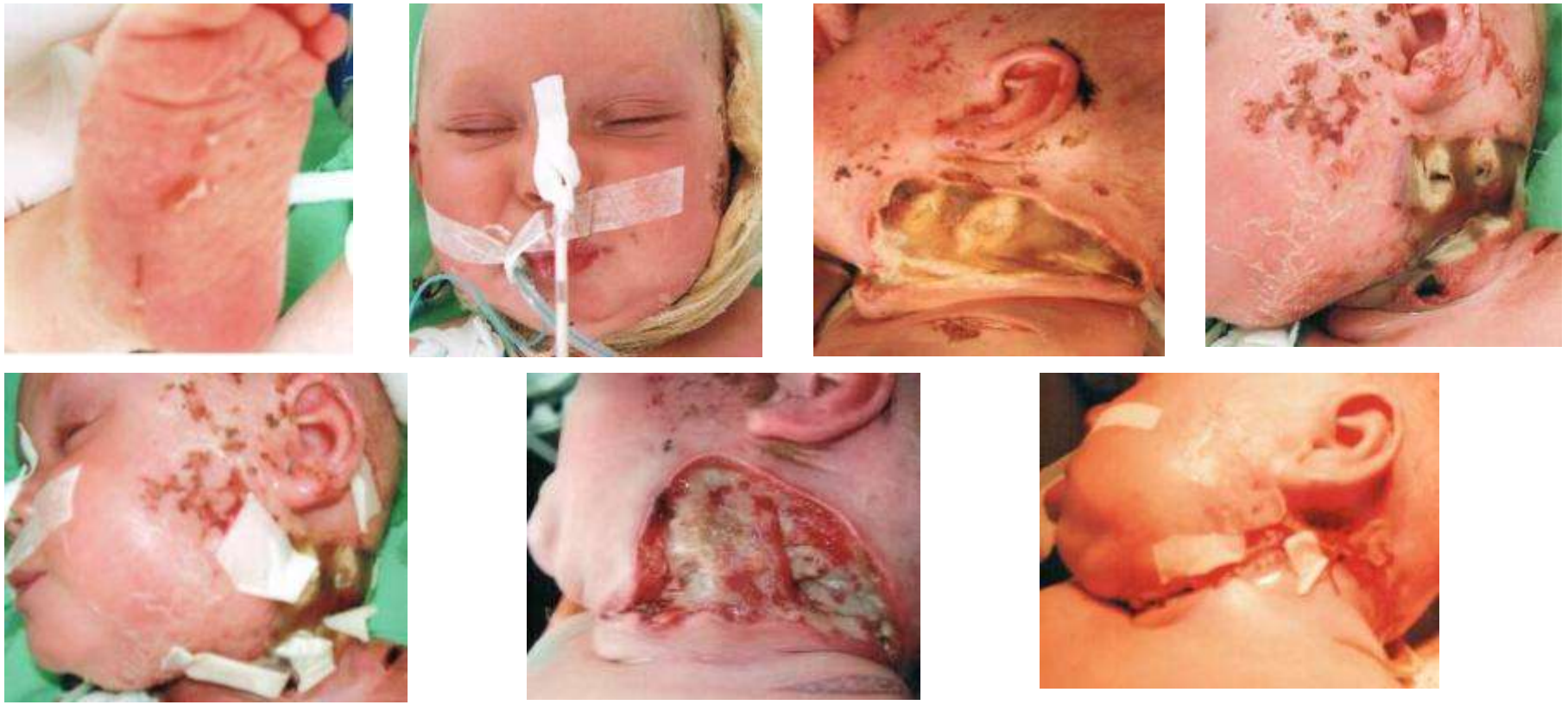
Treatment of abscesses and phlegmon

Surgical intervention - opening and drainage of purulent foci. The directions of the incisions are strictly consistent with the direction of the branches of the facial nerve and blood vessels. Fibers of m.masseter, m.temporalis, etc. move apart in an obtuse way. The open cavity is drained (drainage can be left unchanged for several days until the cessation of pus).

General therapy - according to the generally accepted principles of treatment of acute VP.

Appearance of a patient with phlegmon of the upper lip at the stages of treatment

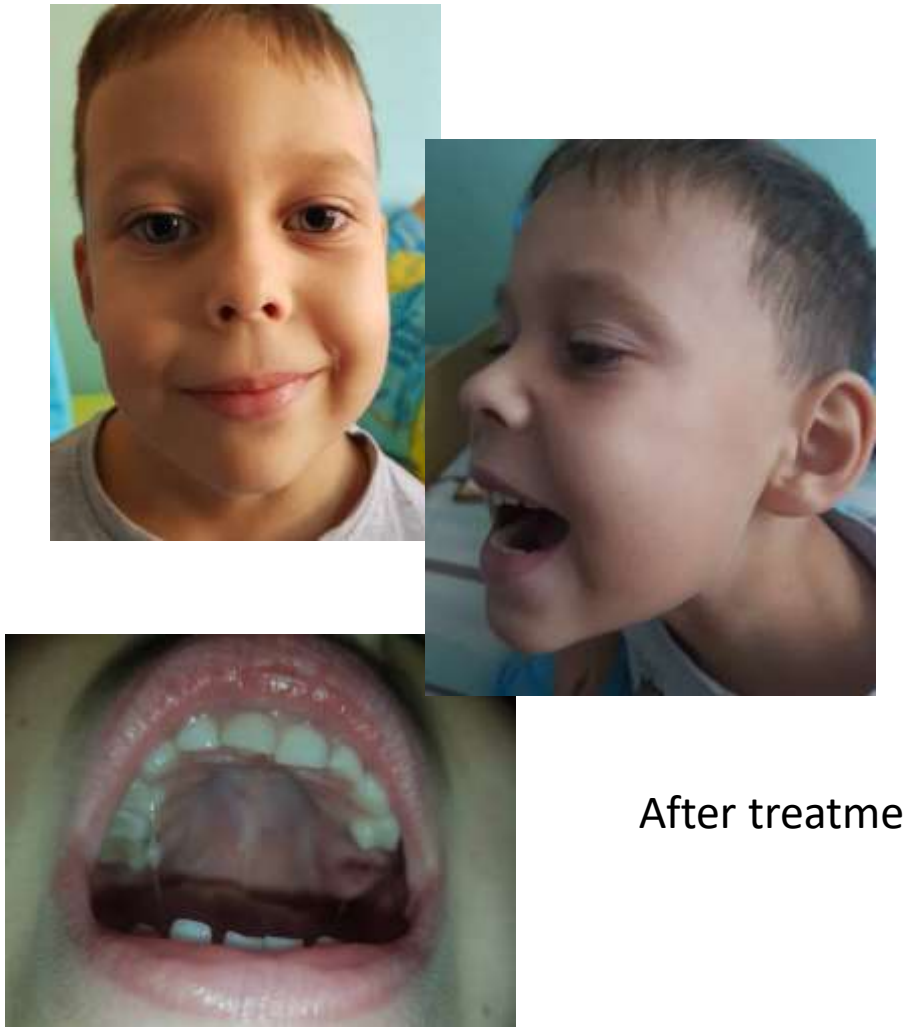
Purulent-necrotic phlegmon - when disclosed, the amount of pus is scanty or absent, the tissues are edematous and sometimes dry, there are pieces of fiber rejection.



Stages of surgical treatment of patient P., 5 months.
Diagnosis: left-sided dermatogenic phlegmon of the parotid-masticatory, posterior maxillary, submandibular regions and the lateral surface of the neck with spread to the supraclavicular fossa, wet skin necrosis,
streptostaphyloderma.

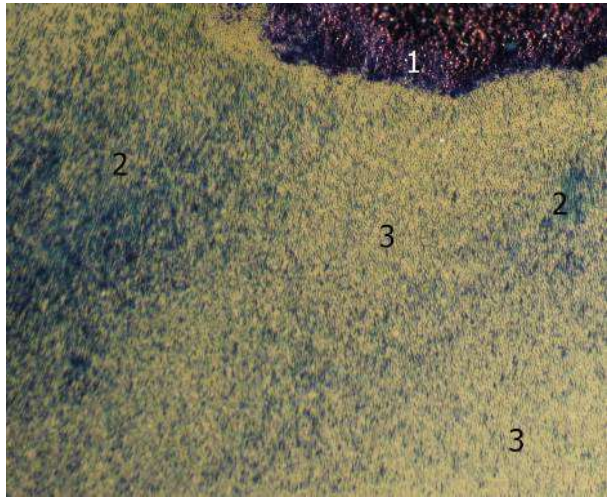
NFILTRACT OF THE LEFT HALF OF THE FACE AFTER AN INSECT BITE,
RETROGRADIC ACUTE PERIODONTITIS 65 AND 26 TEETH

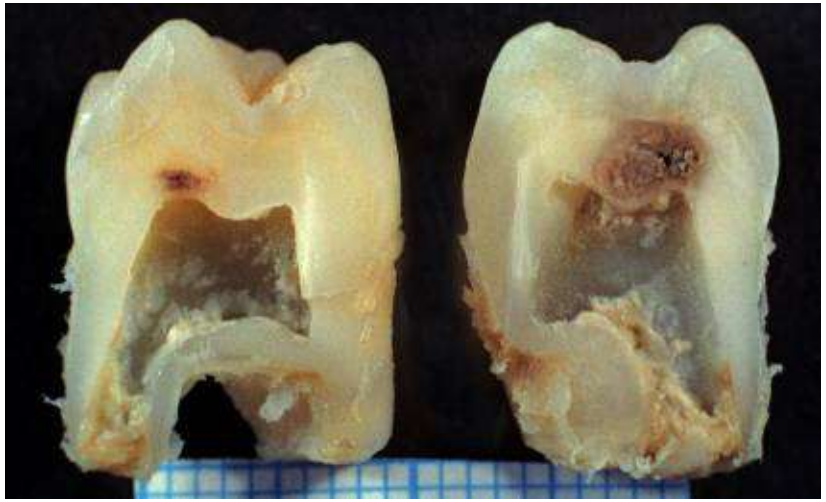
At hospitalization

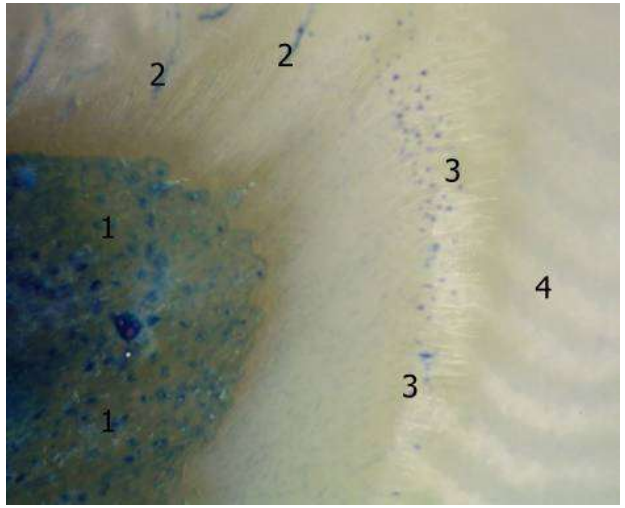


After treatment

INFILTRACT OF THE LEFT HALF OF THE FACE AFTER AN INSECT BITE, RETROGRADIC ACUTE PERIODONTITIS 65 AND 26 TEETH







FURUNCLES AND CARBUNCULES

Provoking factors:

➢ climatic (supercooling or overheating of the body);
➢ household (non-observance of hygiene, skin contamination, squeezing of acne and pustules);
➢ common diseases (diabetes, beriberi);
➢ unsanitized oral cavity.

FURUNCLE - an acute purulent-necrotic inflammation of the hair follicle and surrounding tissues, caused by the penetration of pathogenic microorganisms, most often staphylococci.

The painful inflammatory nodule enlarges, extends beyond the hair follicle and softens.

When opened, the boil is slightly reduced, in the center of it is a hole with a necrotic rod of yellowish-green color. On the periphery the skin is infiltrated, pink-red.

Clinical stages of development:
I. Infiltration (1-2 days).
II. Abscessing (3-4 days after the disease).
III. Healing with the formation of a small scar.






Appearance at the stages of treatment of children with boils of the frontal, periorbital and orbital areas, the corner of the mouth

Carbuncle is an acute purulent-necrotic inflammation of several adjacent hair follicles and sebaceous glands, spreading to the surrounding skin and subcutaneous tissue.

Inpatient pathology.

Severe course with pronounced intoxication, leukocytosis, shift of the leukocyte formula to the left, a sharp increase in ESR.

Complications: angular vein thrombophlebitis, cavernous sinus thrombosis, septicemia (purulent meningitis, pneumonia, purulent pleurisy, etc.).

The most dangerous furuncules and carbuncles of the upper lip, nasolabial folds, corners of the mouth, orbits and periorbital areas.

The pyogenic membrane surrounding boils and carbuncles has a reticular structure, not a dense "shaft", as in abscesses.

Appearance of patients with complicated forms of boils and carbuncles at the stages of surgical treatment:
contact osteomyelitis and osteophlegmon;
cavernous sinus thrombosis

Systematization of uncomplicated and complicated forms of development of furuncles and carbuncles (AA Timofeev, AM Likhitsky, 1995)

I. Uncomplicated forms of furuncules and carbuncles.
1. The initial stage of folliculitis:
a) osteofolliculitis;
b) deep folliculitis.
2. Inflammatory infiltration.
3. Formation and rejection of purulent-necrotic rod.
4. Absorption of inflammatory infiltrate.
II. Recurrent furuncules .
III. Complicated forms of the clinical course of furuncules and carbuncles:
A. Local complications.
1. Inflammation of the red border of the lips, cheilitis (catarrhal, glandular, purulent).
2. Inflammation of the veins (phlebitis, thrombophlebitis).
3. In regional lymph nodes and lymphatic vessels (deep lymphangitis, serous and purulent lymphadenitis, periadenitis, adenophlegmon).
4. Inflammation of the surrounding soft tissues (inflammatory infiltrate, abscess and phlegmon).
5. From the bone tissue (osteomyelitis).
6. Erysipelas.
B. General complications.
1. Sinus thrombosis.
2. Meningitis.
3. Sepsis.

Treatment

Disclosure - according to all the rules of CHLH, most often under local anesthesia. The wound is drained with rubber drainage.

At a carbuncle - wider dissection of skin and hypodermic cellulose with excision of the necrotized fabrics.

Drug treatment:

- antibiotic therapy;
- detoxification therapy;
- hyposensitization and immunotherapy;
- restorative treatment (vitamin therapy);
- symptomatic treatment.

➢ Active specific immunotherapy - staphylococcal toxoid, bacteriophage.

➢ Passive specific immunotherapy - antistaphylococcal plasma and gamma globulin.

Local:

- proteolytic enzymes;
- hypothermia in combination with UFO;
- prickling with novocaine around the abscess;
- helium-neon laser irradiation, etc.

ROSE INFLAMMATION - an infectious disease with local serous or serous-hemorrhagic inflammation of the skin, CO, fever and intoxication.

➢ The causative agent is hemolytic streptococcus group A.

➢ Contributing factors: foci of chronic streptococcal infection on the background of sensitization of the body, especially with fatigue, hypothermia, stress.

➢ Entrance gate - damaged skin.

It begins acutely, in the first days symptoms of intoxication prevail.

Flow periods:

- incubation (from several hours to 3-7 days);
- period of clinical manifestations;
- recovery.

Classification of VL Cherkasov (forms):

According to the severity of local manifestations:
erythematous;
erythematous-bullous;
erythematous-hemorrhagic;
bullous-hemorrhagic.

According to the severity of the infectious process:
easy;
moderate severity;
heavy.

By the nature of the prevalence of local manifestations:
localized;
wandering;
metastatic.

Erythematous form: erythema of the skin with edema and tissue infiltration. The skin in the site of inflammation is hot, sharply painful, tense. The boundaries of the hearth are clear, scalloped, raised, in the form of teeth or tongues of flame. Most often it appears near the nose.

Microscopically: serous inflammation of the dermis and adjacent tissue.

Erythematous-bullous form: blisters (bullae) with serous fluid appear.

Microscopically: serous exudate with neutrophils and lymphocytes, hyperemia, hemorrhage, lymphostasis, venous thrombosis, tissue edema, vascular walls infiltrated by neutrophils. In the epidermis over these areas - desquamation and mild parakeratosis.

Erythematous-hemorrhagic form: hemorrhages appear against the background of erythema.

Bullous-hemorrhagic form: there is fibrinous-hemorrhagic effusion and blisters that turn into pustules.

A complex of therapeutic measures: antibiotic therapy, hyposensitizing, tonic, detoxification and local (symptomatic) treatment.

Complications:

ulcers, necrosis, abscesses, phlegmons, thrombophlebitis, sepsis.

Lymph flow is disturbed and lymphostasis occurs .





A child with a phlegmonous form of erysipelas
at the stages of surgical treatment

ODONTOGENIC SUBCUTANEOUS GRANULEMA

With chronic periodontitis or chronic osteomyelitis of the jaw in the subcutaneous tissue of the cheek forms a small painless round infiltrate 1-2 cm in diameter with cyanotic skin, not abscessing for a long time, but still suppurates with a breakthrough on the skin in the form of a fistula with slight pus. The fistula closes after some time, but at a certain distance from it the abscess again spontaneously opens with the subsequent formation of a fistula ("migrating" granuloma).

In the wound there are sluggish granulations, and at the bottom - dense fibrous tissue.

Appearance of a patient with odontogenic subcutaneous granuloma in the chin area, formed due to chronic periodontitis of 36 teeth

The connection of the granuloma with the VP in the periodontium of the tooth is determined by the presence of a cord.

Development mechanism. Fiber (submucosal and subcutaneous) is deprived of the necessary immunity, and infection from the periodontium, penetrating into the periodontal tissues and facial tissues, does not cause an active inflammatory reaction - a chronic granulation process develops.

Treatment: dissection of the granuloma within healthy tissues and plastic closure of the defect.

➢After removing the "causal" tooth, the granuloma is irradiated with a quartz lamp (5-10 sessions), while conducting a course of autohemotherapy (5-10 injections of 5-10 ml); maturing abscesses open. The area occupied by the granuloma is sharply reduced, the granuloma turns into a dense fibrous nodule of small size - excision with the subsequent plasticity.

SIALADENITES

Ways to introduce infection into the salivary glands:

- ➢through the wound canal;
- ➢through the duct (ductogenic);
- ➢haematogenous;
- ➢lymphogenic;
- ➢ ascending infection from the oral cavity;
- ➢infection spreading from neighboring areas.

Papilla

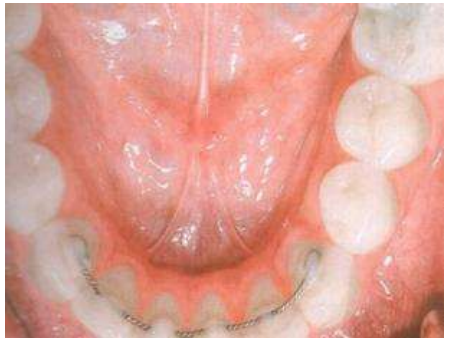
Examination methods

General methods: survey, examination, palpation, blood and urine tests.

Complaints: fever; malaise; vomiting; pain; salivation disorder.

History of the disease: localization and nature of pain and the reasons causing its aggravation; prescription and frequency of swelling of the gland; onset and first symptoms; the nature of the flow of VP.

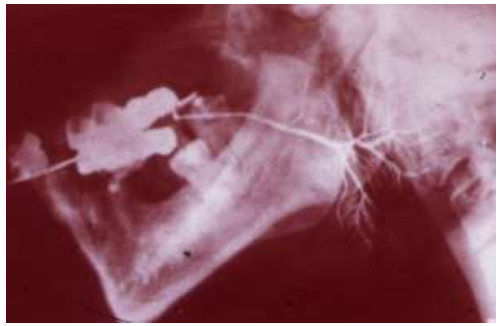
Inspection: condition of MT in the field of SJ; skin color; degree of mouth opening; disorders of the teeth and SOPR, the mouth of the excretory ducts; the nature of the secretion of the affected and symmetrical glands and oral fluid; reaction of regional LU; condition of the affected and symmetrical LV (consistency, degree of infiltration, ratio to adjacent tissues).

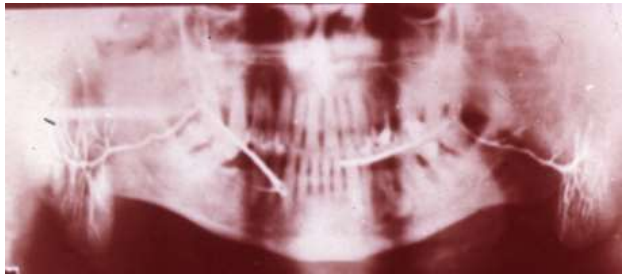


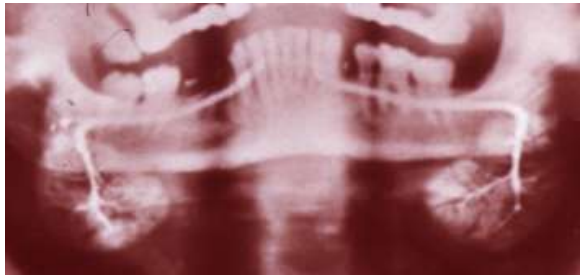
"Sublingual place" where the ducts of PNCHSZh and PYASZh open

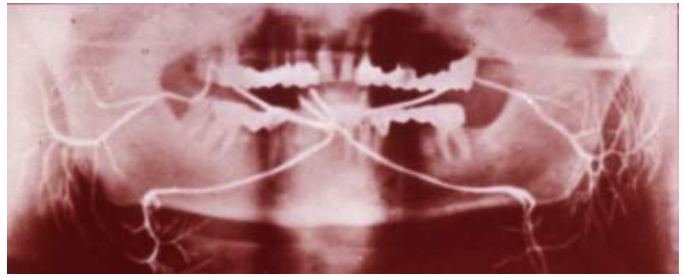
Particular methods: probing of the ducts, sialometry, cytological and bacteriological examination of the secretion of inflamed and symmetrical LV and oral fluid, radiography and sialography of the LV.

Methods of X-ray examination of the CT: review radiography of the CT area (if a concretion is suspected), sialography.









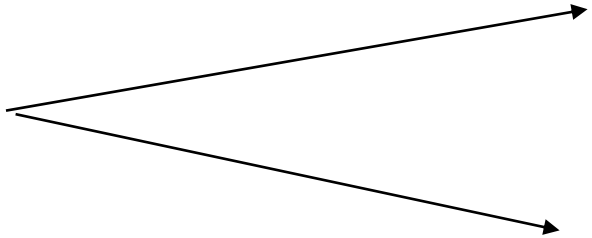
Special methods: biochemical examination of saliva and blood, immunological and radioimmunological studies, radioisotope and radionuclide diagnostics, CT, echosialography, thermovisiography, puncture biopsy, etc.

Classification of sialadenitis in children:

I. Downstream, etiological features:

1. Acute sialadenitis:
   - viral;
   - post-infectious;
   - lymphogenic;
   - traumatic;
   - of unknown etiology.

2. Chronic sialadenitis:
   - interstitial;
   - parenchymal;
   - calculous;
   - sialodochitis.



3. Exacerbation of chronic sialadenitis.

II. According to clinical manifestations:

a) mild severity;
b) medium severity;
c) heavy.

By stages of development of HPP:
1. Initial.
2. Pronounced symptoms.
3. Late

By degree of HPP activity:
1. Inactive flow.
2. Active flow.

Mumps is a highly contagious disease caused by a filtering virus that spreads by airborne droplets.

➢The peak incidence - children 7-10 years.
➢First-year children have antibodies to the virus that are transmitted through the placenta from the mother.
➢After infection, immunity is maintained for life.
➢Often, PNCHSZh are also often involved in VP.

The most vulnerable place of penetration of the virus is CO of the upper respiratory tract and oral cavity: in the beginning pharyngitis, laryngitis or stomatitis are possible, and then the virus enters the bloodstream (primary viremia) and enters the bloodstream, testicles, nervous system.

Incubation period: 11-23 days.

Clinical picture:

• increase in body temperature to 38-390C (7-10 days), signs of intoxication and irritation of the CNS;
• bilateral soft-elastic swelling without clear boundaries in the parotid and maxillary areas (develops in the first three days and after 10-14 days is involuted);
• skin over the swelling is swollen, not changed in color;
• painful palpation at three points: in front of the earlobe, in the projection of the clipping n / h and at the apex of the mastoid process of the temporal bone (location in the tissues of the facial and auricular nerves, the output of the trunks of which are associated with pain);
• opening the mouth is difficult due to soreness;
• *saliva is not secreted from the ducts of the OSUS (dry mouth for 3-4 weeks*), but the transparency and viscosity of the secretion do not change;

Objective test - determination in the dynamics of diastase in the urine, normally its amount in children after 2 years reaches 160 mg (ml / h).

Complications of mumps:

- lesions of the nervous system (meningitis, encephalitis, neuritis, persistent deafness);
- diabetes mellitus;
- pancreatitis;
- orchitis;
- oophoritis;
- mastitis;
- nephritis.

Treatment of patients is complex and individualized.

At an *uncomplicated current:*

- bed rest for 7-10 days;
- balanced diet;
- on a site OUSZh - a dry warm bandage, sollyuks, UFO, diathermy;
- oral care: brushing your teeth twice, chewing crackers, rinsing with antiseptics or decoctions of herbs.

In the presence of complications - treatment in an infectious hospital.

➢*Prevention:*

- isolation for at least 10 days from the onset of the disease;
- separation of sick children under the age of 10 for 21 days from the date of termination of contact;
- vaccination with inactivated or live vaccines - 95-100% efficiency.

Influenza sialoadenitis occurs during the remission of flu symptoms, and sometimes after influenza vaccination.

➢Can be manifested in one or more large and small LVs.

- *Mild form*: slight deterioration of the general condition, temperature 37-37.5 ° C for 2-3 days. Within a week the condition improves. In the area of the SJ - a slight swelling with moderate infiltration of glandular tissue and decreased secretory function.
- *Moderate severity*: significant deterioration of the general condition, temperature up to 38 ° C. The parotid and masticatory region is swollen, MT is dense, the stony gland is infiltrated, there is no secretion. Acute phenomena disappear within a week, but the restoration of functional activity of the SJ and the disappearance of infiltration lasts up to a month.
- *Severe course*: significant deterioration of the general condition, temperature 39-40 ° C. Acute intoxication, purulent melting of the parenchyma of the SJ and signs of its necrosis. Within 1-2 days necrosis of other SZh can arise.

Defeat of the parotid glands: painful opening of the mouth and turning of the head. Swelling of the adjacent anatomical areas.
Lesions of the submandibular SJ: swelling in the submandibular, subchin, sublingual areas and upper neck. Pain when swallowing.
Defeat of the sublingual SJ: painful movements of the tongue, increase in the sublingual folds and dulling of the CO over the gland. It festers quickly enough.

Treatment:

- in the early period - antiviral drugs;
- in necrosis - surgery and drug therapy.

Acute bacterial sialoadenitis occurs more often in the OSJ on the background of infectious diseases or in the postoperative period (especially with interventions on the abdominal organs).

Serous inflammation:
• edema of the SJ with the release of a moderate amount of viscous secretion from the duct;
• with increasing inflammation, glandular tissue necrotizes;
• in secretion smears: cells of cylindrical, squamous, cubic epithelium, significant accumulations of destroyed neutrophils, single lymphocytes and reticular cells.
Purulent inflammation:
• swelling of the SJ with the release of pus from the excretory duct;
• pain while eating.
At serous and purulent mumps the inflammatory phenomena in 10-15 days gradually subside.

Complications:
➢early: the spread of pus into the pharyngeal space and mediastinum or its breakthrough into the external auditory canal;
➢Late: formation of salivary fistulas and parotid hyperhidrosis.

Sialoadenitis of newborns - at 2-10-day-old children at hematogenous hit of pathogenic microflora in SZh or hit of microflora of an oral cavity in ductal system at decrease in reactivity of an organism.
The onset is acute: for no apparent reason, constant crying and anxiety of the child, sleep disturbance, temperature 38-390C, refusal to eat, frequent vomiting and choking on food.

Objectively:
• swelling in the area of the left ventricle with sharply hyperemic and shiny skin that does not gather in a fold;
• infiltration and painful compaction of tissues without clear boundaries;
• dense strands of excretory ducts with edematous and hyperemic CO around the mouth;
• selection of a drop of thick pus from the hyperemic mouths of the ducts during massage;
• at the beginning of purulent melting of SZh - limited or diffuse fluctuation in depth.

Treatment:

➢ *Serous inflammation* - elimination of inflammation and restoration of salivation.

- salivary diet;
- general AB-, hyposensitizing and vitamin therapy;
- 3-4 times a day taking 5-6 drops of 1% solution of pilocarpine hydrochloride;
- daily in the duct system - solutions of AB, antiseptics, proteolytic enzymes, lysozyme, etc .;
- electrophoresis of 5% solution of ascorbic acid at the mouth of the ducts of the affected glands;
- for 20-30 minutes compress 30% solution of dimexid or semi-alcoholic compress on the area of inflammation;
- physiotherapy: UHF, UFO, sollux, electrophoresis of the area corresponding to the SJ with 10% dibunol;
- in acute serous sialoadenitis of moderate severity, proteolysis inhibitors (contracal, gordox, aminocaproic acid, etc.) are introduced into the complex of general measures.

➢ *Purulent inflammation:*

- general antibacterial and hyposensitizing therapies;
- vitamin therapy;
- at an early stage: introduction into the ducts of the affected LV solutions of AB, antiseptics, proteolytic enzymes and electrophoresis of 10% dibunol;
- at the expressed phenomena of suppuration of gland:
- opening of the SJ capsule with the introduction of solcoseril into the wound and a course of physiotherapy (sollux, UFO, UHF);
- introduction of AB and solkoseril solutions into the SJ duct system.

In the near future after treatment, all patients should electrophoresis of 5% solution of ascorbic acid and 1% solution of galantamine.

➢ Serous inflammation does not leave behind morphological disorders.

➢ Purulent and purulent-necrotic processes in the SJ cause destructive changes with a decrease in secretory function (up to its complete cessation).

Interstitial sialoadenitis - in patients with somatic pathology (diabetes mellitus, diseases of the gastrointestinal tract, gonads, etc.).

Clinically: prolonged painless mild swelling of OUSJ or PNCHSZh. The function of the SJ is slightly disturbed, the secret is always transparent.

➢Increase only PNCHSZh - "Kuttner's tumor" (SZh dense and remind a tumor).

➢Dilateral increase only OUSJ - "a sign of Harvat".

During exacerbation, the body temperature rises insignificantly.

On the sialogram: narrowing of ducts of different order.

Cytological characteristics of the secretion: an increase in the number of cells of the squamous and cylindrical epithelium, neutrophils in the stage of degeneration.

Parenchymal sialoadenitis is the most commonly affected OSJ.

Etiology - against the background of reduced immunity in congenital changes of the parenchyma of the SJ with a violation of the structure of the end sections:

- chronic microbial dissemination of OSH;
- transferred acute epidemic or non-epidemic mumps.

➢ Primary exacerbations are most often treated at the age of 4-6 and 10 years.

➢ Cyclic flow:

- inactive form (exacerbations once every 3-5 years);
- active form (exacerbations 2-6 times a year).

Exacerbation phase

Complaints: pain and swelling in the area of OUSJ.
Rise in temperature to 37-38 ° C, lethargy, tearfulness

Clinical picture

➢Orienting the mouth is painful, slightly limited.

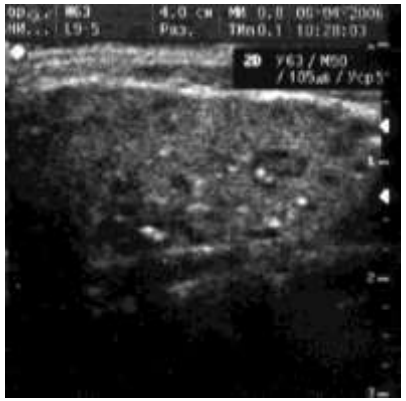
➢The skin over the enlarged gland is not changed, it gathers into a fold.

➢Reactive enlargement of regional submandibular lymph nodes.

Palpation: SJ dense, small-bumpy, painful, sometimes painless or unpleasant.

Decreased LV function: viscous secretion with small whitish flaky inclusions.
Phase

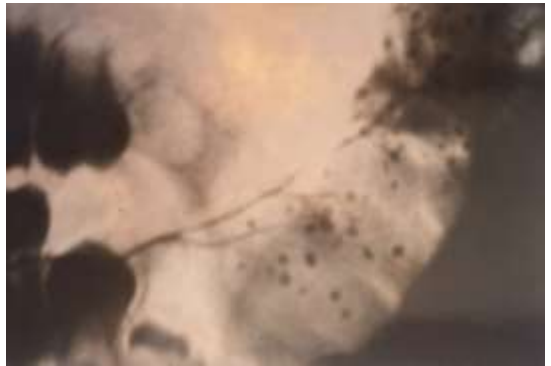
Ultrasound gram: the capsule of SZh is condensed, and SZh of inhomogeneous structure due to sialectasis of the different sizes around which the echo-compacted fabrics are located.

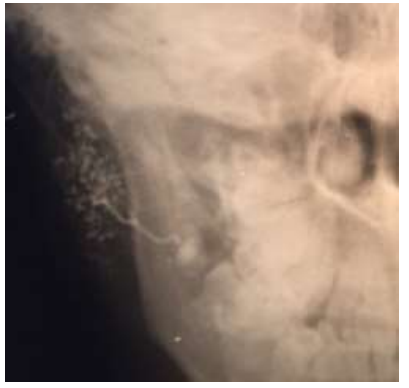


Diagnosis: bilateral HPP,
exacerbation on the left; remission on the right.

The SZh capsule is echo-compacted, the structure of the parenchyma is heterogeneous due to the presence of anechoic areas with a diameter of 1-5 mm and the compaction of the tissues around them

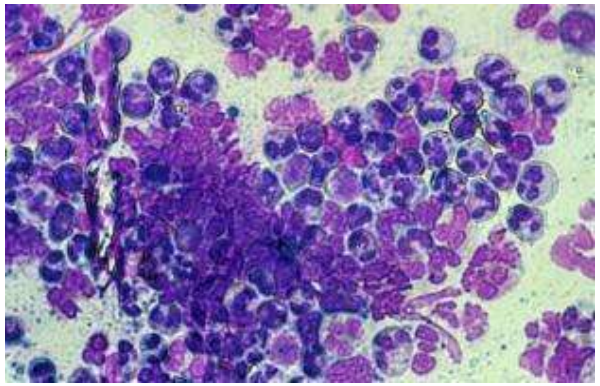
Sialogram: sialectases of various sizes without deformation or with deformation of the excretory ducts of the SJ.

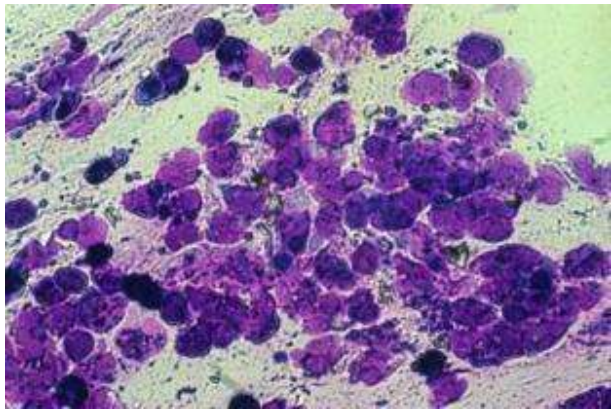


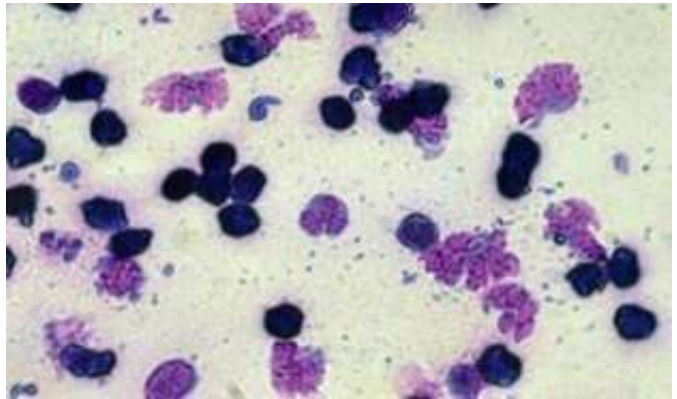


Cytology of secretions:

a large number of inflammatory cells (numerous neutrophils, single lymphocytes, macrophages), altered epithelial cells







Photomicrographs of smears of parotid secretion on the right OUSJ patient with exacerbation of CP on the right (active current)

• during treatment (against the background of a dense protein substrate is determined by the accumulation of a significant number of neutrophils, single lymphocytes, monocytes, eosinophils and destroyed squamous epithelial cells);

• for 2 days (against the background of moderate protein substrate density are determined mainly destroyed neutrophil cells, single lymphocytes, monocytes and eosinophils);

• 5 days from the start of treatment (disparate groups of different cellular elements on the background of protein foci).

Treatment of patients with CPP:

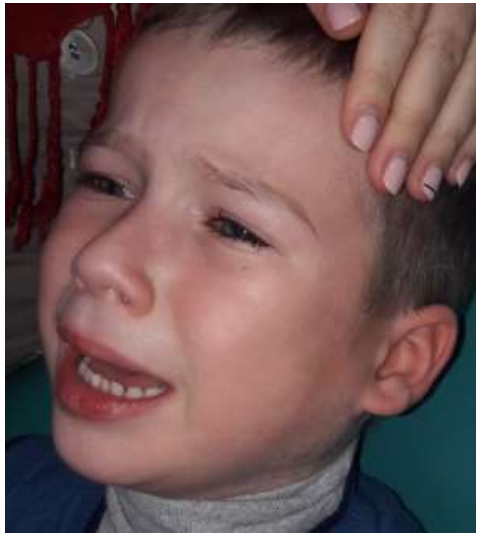
➢ *Exacerbation* - elimination of VP, prevention of increase in pathological changes in SZh, normalization of its secretory function.

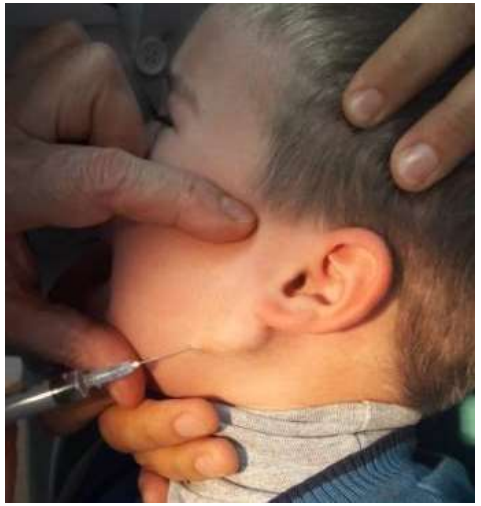
- Techniques are similar to those for acute mumps of mild and moderate severity.
- In addition, instillation into the LV of heparin (0.5 ml for 2-3 days) to improve the rheological properties of the blood, preserve microcirculation and prevent the death of acinuses.
- After cessation of VP - the introduction of proteolytic enzymes or 2% solution of sodium bicarbonate (to improve the outflow of thick viscous secretion).
- Physiotherapy: UHF, fluctuorization.

➢ *Remission* - prevention of exacerbation, reduction of progression of functional and anatomical disorders in the thyroid gland, comprehensive rehabilitation of children.

- Held twice a year (spring and autumn).
- Treatment of concomitant chronic diseases.
- OUSJ massage (1-2 times a day for 3-5 minutes) to regularly release them from the thick secretion.

  - 0.4-0.8 ml of rosehip or sea buckthorn seed oil is injected three times a month to increase the protective properties of the duct epithelium and its regeneration, to improve the condition of peripheral capillaries in the duct of the affected gland.
  - Orally - retinol acetate (5,000 to 10,000 IU depending on age) or ascorbutin for 7 days.
  - SJ electrophoresis with 1% solution of ascorbic acid or 3% solution of potassium iodide (№ 10-15).
  - Use of non-specific biogenic stimulants.





Stages of treatment of a child with exacerbation

Calculus sialoadenitis occurs mainly at the age of 8-14 years.

➢87.5% of cases are localized in PNCHSZh.
➢A congenital anomaly in the form of a diverticulum occurs in the main duct of the affected SJ.

Salivary stones of round shape - of intraglandular origin, and oblong are formed in the main excretory ducts of the SJ.

Clinical signs:

- acute or lingering pain when eating and swelling of the thyroid gland;
- mouth opening is somewhat limited;
- increase in the sublingual roller;
- CO redness at the mouth of the duct;
- the secret is muddy, in the reduced quantity.

- *Palpation*: limited infiltrate in the mandibular region; PNCHSZh is increased, dense, painful (sometimes it is possible to reveal existence of a concrement). Submandibular lymph nodes are enlarged, painful.

- *Sialogram*: defect of filling of a duct of SZh at the level of a stone and considerable expansion of a duct behind a concrement with lack of accurate drawing of a parenchyma.

- *Cytology of the secretion*: a large number of cells

Calculus sialoadenitis: enlargement of the sublingual roller, CO redness at the mouth of the duct

Intraoral radiograph of the bottom of the mouth. Salivary stones with concentric stratification are identified in the PNSCS duct

Treatment

Surgical removal of salivary stones:

➢ a grooved probe is inserted into the SJ duct;

➢ under infiltration anesthesia, the duct from the mouth is cut through the probe to the stone;

➢ movements of the index finger along the mandibular duct from back to front salivary stone is placed in the wound and removed;

➢ rubber drainage for 24-48 hours, fixed to the CO edge of the wound with 1-2 sutures.

• Usually, after the stone is removed, a large amount of stagnant purulent secretion is released from the dissected duct during the massage of the SJ.

• If the calculus is located in the upper pole of the SJ, the removal is made by cutting over it, and the stone is removed with a Folkman spoon.

• Clinical recovery occurs before the cellular composition of the SJ secretion is normalized.

• Dilatation of the mandibular duct persists for a long time.

Ductal sialoadenitis (sialodochitis) with decreased LV function on the background of congenital ectasia of the ducts.

Clinical picture:

➢ periodic swelling of the LV during eating, disappearing on their own after eating;

➢ when massaging, the secret is released in the form of a "stream";

➢ Without treatment, an exacerbation develops (picture of acute sialoadenitis).

➢ Sialogram: unevenly expanded ducts of different order.

Treatment. Exacerbation:

- ➢ exclusion from the diet of spicy and salty foods;
- ➢ antibacterial, hyposensitizing and detoxifying therapy.

• In the ducts of the SJ - solutions of AB in combination with 2% sodium bicarbonate solution.

• Boozing of the mouth of the duct SJ 2 times a day.

• Massaging the affected SJ in the morning (before meals) and in the evening (before bedtime).

• Fluctuating currents (to remove thick secretions and good analgesic effect).

• Compresses with 30% dimexidum (for 20-30 minutes) on the SJ area.

• 3 weeks after exacerbation - introduction into the duct of the affected SJ rosehip seed oil (7 procedures a day). At the end of the course - electrophoresis of 1% solution of ascorbic acid on the duct.

The complex of treatment-and-prophylactic measures is carried out 2 times a year (in spring and autumn).

At considerable narrowing of a mouth of a channel after elimination of the sharp phenomena - operative expansion of a mouth with use of special probes-hooks: the probe is entered into a channel mouth and the return movement on itself is fixed by a hook, the channel from a mouth to a place of fixing of a hook is cut. After suturing the wound surface of CO and the dissected duct with silk, an enlarged mouth is formed, which improves the outflow of SJ secretion during its active function.