

# **SPECIFIC INFLAMMATION DISEASES IN THE MAXILLA- FACIAL REGION**

Sofia Lehtman, Doctor of Medicine, Maxillofacial Department

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- ✘ In the maxilla-facial region special group are inflammatory processes, caused by the specific activators, such as: lambent fungus, pallidum treponema, microbacteria of tuberculosis.
- ✘ **Actinomycosis**
- ✘ Actinomycosis, or lambent fungus disease, is chronic infectious disease, appeared in the result of implementation in the organism of actinomycetes (lambent fungus).
- ✘ In the mouth cavity actinomycetes live permanent. They are in the teeth accretion, carious teeth cavity, pathological subgingival spaces, on tonsils. Actinomycetes are the main dental tartar stroma.
- ✘ The considerable importance in the actinomycosis development have general reasons, which lower immunity, and also local moments, such as: inflammation, trauma, breach of the normal symbiosis of actinomycetes and other microflora.

# CLINICAL PICTURE

- ✘ The clinical picture of the disease depends from the individual peculiarities of the organism.
- ✘ Actinomycosis of the maxilla-facial region differs by the significant variety. Often the primary period of this disease course is unnoticed, do not accompanied by pains and flows without temperature increase. With reference to this, the patient, in the primary periods of the disease, does not hurry to the doctor, and refers approach to the hospital only when the disease process is aggravated, in other words with the firm inflammatory inflation or during the breaking specific granuloma - abscess formation.
- ✘ Usually clinical flow of the actinomycosis is chronic, during the breaking of specific granuloma the disease takes the acute course of disease.



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- ✘ On the primary stages of disease is observed inflammation infiltrate without sharp borders and characteristic to the actinomycosis tissue density.
  - ✘ During the localization of the actinomycosis process in the skin and in its neighboring tissues (subdermal cellulose) rather quickly, in the course of 2-3 weeks, happens the limitation of the focus, their mollities and self-existing opening of degrading granuloma.
  - ✘ It should be distinguished following clinical forms of actinomycosis of maxilla-facial and neck region.

1. Dermal;
2. Subdermal;
3. Submucosal,
4. Mucosal,
5. Odontogenic actinomycosis granuloma;
6. Subdermal-muscle (deep);
7. Actinomycosis of maxilla periost;
8. Actinomycosis of lymph nodes;
9. Actinomycosis of maxilla bone;
10. Actinomycosis of mouth cavity organs – tongue, tonsils, salivary glands, supramaxillary cavity.



- ✘ **Dermal form of the actinomycosis** occurs relative seldom. Disease appears in the result of odontogenic infection penetration, as a damage of skin integuments. Patients complain on the insignificant pains and induration on the small extends of cheek skin, submandibular region, neck or during the interview point out on the gradual increase and induration of the focus.
- ✘ Dental actinomycosis courses without temperature increasing. During the examination it is observed inflammatory infiltration of the skin, emerges one or several focuses, which grow outside.



- ✘ **Subdermal form of actinomycosis** is characterized by the development of the pathological process in the subdermal cellulose, as a rule, directly nearby odontogenic focus, which is the portal of entry of specific infection. Patients complain on pains and inflation in the buccal or other regions; submandibular, parotid-masticatory, retromandibular regions, neck.
- ✘ During the examination the inflation is diffuse, during the palpation in the subdermal cellulose is defined roundish infiltrate, in the beginning solid and painless, but forward, in proportion to fusion granulomas are in the center, soft and painless. In the period of decay of specific granuloma skin solders together with subject tissues, becomes hotpink to red.



- ✘ **Submucosal form of the actinomycosis** occur relative seldom. The submucosal form of the actinomycosis courses without temperature rise or its insignificant rise until the subfebrile numbers, with moderate painful sensation in the damage focus centers. Pains increase during the movement – mouth opening, deglutition, speech. In the process dynamics increase the sensation of special discomfort “debride”.

- ✘ During the palpation it is observed solid infiltrate of roundish form. During the process infiltrate is limited, becomes more solid, the mucosa membrane under it solder, gets cloudy, often acquire pale color. Submucosal actinomycosis focuses in the region of aliform-maxillary fold, peritonsillar region is characterized by significant solid tissues, which together with hypertrophic amygdale remind the picture of malignant tumor.
- ✘ Focus opening allows mentioning the presence of clearly restricted region, filled by saniopurulent exudate and granulations.



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- ✘ **Actinomycosis of the mouth cavity mucosa membrane** occurs seldom. During the affection of the mucosa membrane of the mouth cavity filamentous fungus penetrate through damaged and inflamed mouth mucosa membrane.
  - ✘ Traumatic factors can be debris, such as: herb's awns, grasses, fish bones. Favorite place of affection is mucosa membrane of the lower lip and cheek, sublingual region, lower and lateral side of tongue. The mucosa membrane in the place of affection has red, sometimes cyanotic color.

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- ✘ **Odontogenic actinomycetic granuloma.** The formation in the tissues of the periodont of the primary actinomycetic granuloma happens more often as not. During the localization of the actinomycetic odontogenic granuloma in the derma and in the subdermal cellulose is observed a band, along the transitory fold, coming from tooth to the focus in soft tissues.

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- ✘ **Subdermal – muscle (deep) form of the actinomycosis** develops in the subdermal, intermuscular, interfascial cellulose.
  - ✘ It is localized in the submandibular, buccal or parotid-masticatory regions, and also affects tissues of temporal, suborbital, zygomatic, subtemporal fossa, aliform-maxillary space and lateral part of the neck.
  - ✘ During the acute phase it is observed cyanosis of the skin integuments over the infiltrate; appeared in separate infiltrate parts focuses of mollities remind not big forming abscesses.



- ✘ **Actinomycosis of lymph nodes.** At all times between doctors indurates the opinion that actinomycosis do not affect lymph nodes.
- ✘ Actinomycosis of lymph nodes appears as a result of odontogenic penetration of infection. During the actinomycosis of lymph nodes the process is localized in buccal and supramaxillary lymph nodes.
- ✘ Clinical picture is various. Patients complain on the limited, slightly sickly, solid inflation corresponding to one of the lymph nodes group. From the anamnesis is apparent that affection of the lymph nodes develops slowly and droopingly, appeared less sickly lymph node increase slowly and around it grows tissues infiltration.

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- ✘ **Actinomycosis of maxilla periost.** It is affected predominantly the periostenum from the vestibular part of the mandibular, more often it is marginal process on the level of first lower molar. Clinical it is observed solid infiltrate, more often along the transitory fold, its flatness, mucosa membrane over it is red, sometimes bluish color.

- ✘ **Actinomycosis of the maxilla bone** occurs seldom. In the early periods patients complain on the insignificant pains in the region of the affected bone part. During the immediate neighboring intraosteal focus with the mandibular canal is damaged sensibility in the region of facial nerve arborization. Hereafter pains become more intensive, can accept the character of neurologic pains, often it is observed the edema and infiltration of soft tissues or periosteal thickness of the bone, develops the inflammatory contracture of the mastication muscles.
- ✘ According to X-ray picture, the primary destructive actinomycosis of the maxilla is characterized by the presence of one or several symphysic cavities of roundish form, but always clearly circumscribed.

- ✘ **Actinomycosis of the mouth cavity organs** – actinomycosis of the tongue, tonsils, salivary glands, maxillary cavity. – occur comparatively rare and represent significant difficulties for diagnostics.
- ✘ **Actinomycosis of the maxillary cavity** occurs rarely. Infection penetrates by rinogenic and rarer by odontogenic way.
- ✘ Clinical it is observed hinder nasal breathing, sometimes purulent discharge from the nose. The frontal side of the maxilla is thickened; the mucosa membrane of the transitory fold is thickened by the periostenium.
- ✘ According to X-ray examination actinomycosis of the maxillary cavity is characterized by its homogeneous blackening with the well-marked cavity walls.

- ✘ **Diagnosis.** Faded and long course of odontogenic inflammatory processes, unsuccessful led anti-inflammatory therapy always affray concerning actinomycosis.
- ✘ The diagnostic of actinomycosis lighten the appearance focus softening, covered by reddish, with bluish color skin, line of fistula tracts.
- ✘ Clinical diagnosis of actinomycosis should be supported by the examinations of the separate, diagnostic skin- allergenic reaction with the actinolysate, X-ray and pathomorphological examinations.
- ✘ Cytological exanimations of the colored smear permits to find out the process character, to establish the presence of mycelium actinomycetis , secondary infection, and also according to cell`s composition judge about the reactive ability of organisms.

- ✘ **Treatment.** The treatment of the actinomycosis of the maxilla-facial and neck region should be complex and be composed from immunotherapy (actinolysatetherapy and vaccinetherapy), stimulating and surgical treatment.
- ✘ Actinolysat - is an medication, which represents the product of spontaneously lyse bouillon aerobic cultures of pathogenic actinomycetis, detached from the pathological material during the peoples actinomycosis.
- ✘ Actinomycetic polyvalent vaccine (APV) – is a new medication, offered for actinomycosis treatment.
- ✘ During often aggravation of the process, tendency to the expansion apply massive courses of antibiotics in relation to microflora sensibility: ocsyciline, eritromecine, oleandomecine, fusidine.

- ✘ The surgical treatment of the actinomycosis consists in:
- ✘ Teeth extraction, which were portal of entry of actinomycetic infection;
- ✘ Opening of the actinomycetic focuses in the perignathic tissues.
- ✘ The good effect gives iodine electrophoresis, sol.Lidazi, ultrasound, lasar rays on the cicatrices, and rudimentary infiltrates during the actinomycosis.
- ✘ **Prognosis.** Prognosis during the actinomycosis of maxilla-facial region in many cases is productive (advantageous).

## ✘ Tuberculosis.

- ✘ It is possible the penetration of the tuberculate infection through damaged mucosa membrane of mouth cavity or during tissues inflammation of mouth cavity and jaws.
- ✘ **Clinical picture.** In the maxilla-facial region it is usual to distinguish primary and secondary tuberculate affection.
- ✘ Primary tuberculate affection usually is formed in the skin region of the mouth cavity mucosa membrane, lymph nodes of maxilla-facial region. On skin or on the mouth cavity mucosa membrane a some weeks after penetration of the tuberculate infection forms papulous, bullate or pustulous formation, which is opening out with the formation of painful ulcer with abrupt, mine edges and floor, fulfilled by the grainy granulations yellowish or pinkish color.
- ✘ Primary affection of lymph nodes of maxilla-facial region appears during the entry of tuberculate infections through teeth, tonsils, mucosa membrane of mouth cavity and nose, face skin during their inflammation or damage.









- ✘ Secondary skin tuberculosis - scrofuloderma occurs predominantly at children and is localized in the skin of submandibular, submental, cervical, parotid regions. Skin over the focus is sharp drawn and on its surface are seen separate fistulous tracts or ulcers of incorrect form, filled by abundant granulations. On the skin you can be seen the “phenomena of apple jelly” – change of the liupom color during the diascopy. In the mouth cavity, during the gingiva affection, the process can spread on the alveolar bone. The process flow is slow. As bosselations, as ulcers, can be many months and years.
- ✘ The affection of the mucosa membrane of mouth cavity by miliary-ulcerous tuberculosis happens during the difficult tuberculosis form of lungs and throat. Mucosa is affected in the result of entry in the mouth cavity of the significant number of tuberculous microbacterion with expectoration, during the lowering of organism`s reactivity.



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- ✘ More often the process is localized on the cheek mucosa, especially across the line of teeth articulation on the gingiva and tongue mucosa.
  - ✘ The disease more often proceeds in chronic form and is accompanied by subfebrile temperature, general asthenia, appetite loss.
  - ✘ Maxilla tuberculous appears secondary in the result of spread of tuberculate mycobacteria hematogenic or lymphogenic from to the organs, from breathing organs and alimentary organs.

## ✘ **Diagnosis.**

- ✘ Diagnosis of the tuberculous affection of maxilla – facial region tissues has special difficulties. In the case if the process spreads on the bone, it should be differentiated with a banal inflammation, actinomycosis and syphilis, and also with malignant neoformations.
- ✘ Maxilla-facial region tuberculous diagnostics consist from range of methods. First of all this is tuberculinodiagnostics, which allows establishing the presence of tuberculate infection in the organism. Tuberculin solutions are used according different methods (Mantoux test, Pirke, Coha).
- ✘ **The treatment** of patients consists from the complex apply of streptomycin, ftivazide. Teeth with the affected by the tuberculous periodont can be extracted.

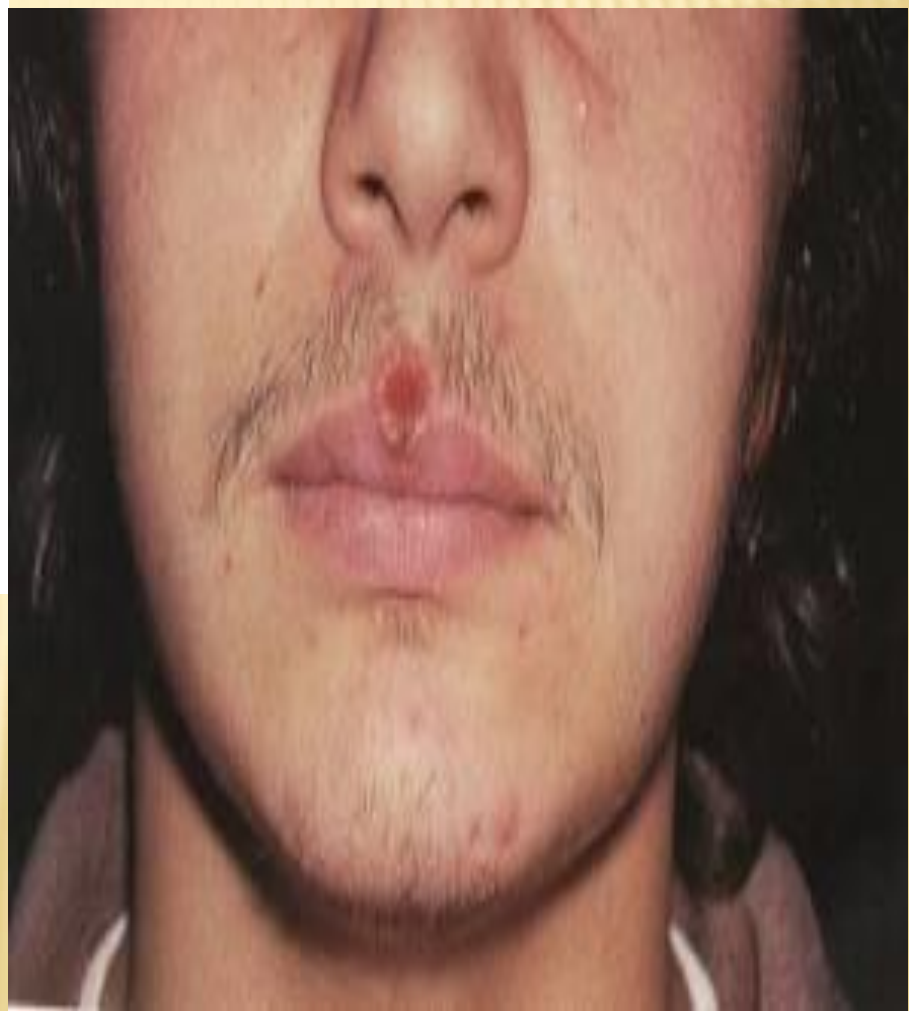
- ✘ **Syphilis.**
- ✘ Syphilis is a chronic infectious venerean disease, caused by *Treponema pallidum* (spirochaete), which can affect all organs and tissues also maxilla-facial region.
- ✘ This disease has 4 periods: syphilis I, syphilis II, syphilis III and syphilis IV. After implementation of different medications for syphilis treatment (iodine medications, bismuth, arsenic, penicillin) the clinical picture of disease and its separate manifestations significantly changed. The tissue pathology of the maxilla-facial region is seen in particular during first third syphilis stages, and also separate disorder are seen during the inborn syphilis.



- ✘ **Primary syphilis (Syphilis I)** is characterized by the appearance on the mucosa and also in mouth cavity of primary syphiloma or hard chancre. The primary syphilitic focus usually appears on the red edge of lips, lips mucosa, cheek, gingiva, tonsils and on the tongue.
- ✘ The disease begins from the limited space of mucosa inflammation, which is thickened until the cartilaginous consistency. For the primary affection of the mucosa of mouth cavity is characteristic increasing and induration regional lymph nodes, predominantly of submandibular, parotid, submental.
- ✘ **Secondary syphilis (syphilis II)** more often affects mucosa of the mouth cavity and has an aspect of pustulous or roseolous elements. Their typical localization is on tonsils, tongue, neck mucosa and lip mucosa.
- ✘ The papule formation is characterized by the appearance of the sharp limited space of hyperemia of the mucosa with infiltrate of its foundation.

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- ✘ *Tertiary syphilis (syphilis III)* is characterized by the formation of such named - gumma. Gumma represents infectious granuloma, which includes lymphocytes, plasmatic and monocytoïd cells with the significant development of blood vessels. The third syphilis should be differentiated as: mucosa syphilis, periostenium syphilis, and maxilla bony tissue syphilis. Between the gummatous affections of mouth cavity mucosa the process localization in the soft palate the has a range of peculiarities. In the bone originates gradual tissue healing with the formation of rough, solid, often astringent cicatrices, after degradation of the gumma. In the bone develops hyperostosis, exostosis, namely along the edges of bony defects.
- ✘ **Diagnosis.**
- ✘ Diagnosis of the syphilitic affection of the mouth cavity, teeth and jaws represents known difficulties, as has a range of features similar with other specific processes – actinomycosis, tuberculous, premalignant affections of mouth cavity, malignant neoplasms.

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## ✘ Treatment.

- ✘ The treatment of the syphilis of the mouth cavity and jaws is divided into general and local. More effective is therapy by bicillin in combination with antibiotics.
- ✘ Simultaneously with the general treatment is led local treatment. It consists in ablution of syphilitic elements, exulceration of fistulous tracts by different antiseptic solutions, more often by the 2% of chloramines solution.