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MODERN METHODS OF PHLEGMONA TREATMENTWITH TYPE 2 DIABETES

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Abstract: One of the most difficult and urgent problems of modern purulent surgery is the treatment of patients with phlegmons of the face and neck. This pathology is characterised by wide prevalence, difficulties in diagnostics at the early stage of the disease and severe course, often leading to lethal outcome. In patients diagnosed with phlegmons of the face or neck is often observed a decrease in immune status, which leads to a protracted course of the disease. In the presence of severe concomitant pathology, especially in the elderly and elderly, immunodeficiency leads to frequent complications.
Keywords: treatment methods, phlegmon, maxillofacial surgery.

INTRODUCTION.

Phlegmon is an acute spilt purulent inflammation of the skin and fibrous spaces caused by bacterial infection. Inflammatory diseases of the maxillofacial region, as a rule, have an infectious nature. Depending on the localisation of the "entrance gate" for microorganisms, odontogenic, stomatogenic, rhinogenic, tonsilogenic, otogenic, dermatogenic acute and chronic inflammatory processes of the maxillofacial region are distinguished. The causative agents of abscess and phlegmon are various microbes and their associations: aerobes, anaerobes, Gram-positive and Gram-negative, Escherichia coli, Proteus, Enterobacteriaceae, but most often - staphylococci, streptococci and bacteroides. Patients with inflammatory pathology account for 40 to 60% of patients seeking inpatient dental care. Among them, the vast majority (60-80%) suffer from phlegmons of the face and neck. In 3-28% of cases of phlegmons of the maxillofacial region and neck tend to progression of the process, which often leads to the development of such formidable complications as mediastinitis, sepsis, meningitis, meningoencephalitis, thrombosis of facial veins and cerebral sinuses, posing a threat to the life of the patient.

Mortality in common phlegmonomas of the face and neck ranges from 28 to 50%.According to statistics, the cause of the pathological process in 65% are anaerobic-aerobic associations - in 65%, in 26% anaerobes and only 6% of patients aerobic pathogens. Within these associations bacteria enter into synergistic and antagonistic relationships. This explains the significant worsening of the clinical picture in the presence of anaerobic-aerobic associations. Odontogenic microflora of the tooth cavity through the root canal spreads to the peri-superior periodontium, and why into the surrounding tissues of the tooth. This is the odontogenic route of infection in 98% of all abscesses and phlegmons of the maxillofacial region, and only 2% of cases are caused by neodontogenic infection, when the spread of microflora in the maxillofacial region is haematogenic, lymphogenic

and contact from other anatomical areas. Inflammatory diseases of the maxillofacial region, as a rule, have an infectious nature. Depending on the localisation of the "entrance gate" for microorganisms, odontogenic, stomatogenic, rhinogenic, tonsilogenic, otogenic, dermatogenic acute and chronic inflammatory processes of the maxillofacial region are distinguished. The causative agents of abscess and phlegmon are a variety of microbes and their associations: aerobes, anaerobes, Gram-positive and Gram-negative, Escherichia coli, Proteus, Enterobacteriaceae, but most often - staphylococci, streptococci and bacteroides. According to statistics, the cause of the pathological process is anaerobic-aerobic associations in 65%, anaerobes in 26% and aerobic pathogens in only 6% of patients. Within these associations bacteria enter into synergistic and antagonistic relationships. This explains the significant worsening of the clinical picture in the presence of anaerobic-aerobic associations.Odontogenic microflora of the tooth cavity through the root canal spreads to the peri-superficial periodontium, and why to the surrounding tooth tissues. It is this - odontogenic - path of infection is observed in 98% of all abscesses and phlegmons of the maxillofacial region, and only 2% of the cause is neodontogenic infection, when the spread of microflora in the maxillofacial region occurs haematogenic, lymphogenic and contact path from other anatomical areas. According to the severity of the course of the disease patients with phlegmons are conditionally divided into 3 groups, the 1st (mild) - patients with phlegmons localised in one anatomical region, the 2nd (medium severity) - patients with phlegmons, localised in two or more atomic areas; 3rd - critically ill patients with phlegmons of soft tissues of the floor of the mouth cavity, neck, half of the face, as well as a combination of phlegmons of the temporal region with subclavian and wing palate fossa. Diagnosis of abscess or phlegmon of the maxillofacial region (maxillofacial region) is clinical and is established on the basis of patient complaints and history of the disease, visual inspection, clinical, laboratory and instrumental methods of research. Of great importance in establishing the correct diagnosis is a carefully collected anamnesis. It is recommended to carefully interview the patient with the identification of characteristic clinical complaints and symptoms. The disease most often begins with acute or aggravated chronic periosteal or marginal periodontitis. During the acute period, the main complaints are tooth pain and swelling. When the infection spreads through the nutrient canals and osteon canals to the peri-mandibular tissues, symptoms indicating the presence of an inflammatory process in them appear. In this case, there is swelling of soft tissues with marked hyperaemia of the skin and infiltrate in depth. Regional lymph nodes increase and become painful. Sometimes (depending on the localisation of the process) there is restriction of mouth opening and impaired swallowing function. Subsequently, in the area of the infiltrate appears a focus of softening and fluctuation. Pain, which was quite intense at the onset and development of abscess, at purulent melting of tissues decreases, body temperature rises. As a result of the clinical study was proved relatively high efficacy of topical application of cream Argosulfan in the complex treatment of phlegmons of the face and neck. The use of silver sulfathiazole allowed to provide antibacterial effect on the causative agents of purulent-inflammatory process and save the moisture necessary for optimal wound healing. The use of this product allowed to reduce the time of cleaning and suturing of the wound in the postoperative period.

Also, the use of this drug allowed to achieve the best cosmetic effect due to less pronounced scarring during healing of the sutured wound. The most common complications of phlegmons of the face and neck are thrombosis of the cavernous sinus, anterior (usually) mediastinitis, multi-organ failure and severe septic conditions. As a consequence, with a severe and prolonged course of the pathology under discussion, the mortality rate is quite high. Depending on the methods of surgical treatment used, antibacterial drugs and local antiseptics, from 10 to 25%. In microbiological examination of wound secretion, the most frequently isolated bacteria were staphylococcus group bacteria (Staphylococcus aureus and Staphylococcus epidermidis) and streptococci (Streptococcus anginosus and Streptococcus pyogenes). The number of microorganisms in the wound progressively decreased from 105-106 CFU/ml of wound discharge on the 1st day to 102-103 CFU/ml on the 7th day of the study. At the same time in the main group by the 4th day of treatment there was a decrease in the level of bacterial contamination, and by the 7th day there was almost complete elimination of the pathogen. In the comparison group there was only a slight decrease in the level of microbial bodies on the 4th day and by the 7th day bacterial

bodies were still found in a small amount. The patients of the experimental group had normalisation of body temperature on the 3rd-4th day (3,57±0,43), while in the patients of the comparison group the temperature decrease was noted on the 5th-6th (5,64±0,28) day after surgical treatment ($p<0,05$).

The general blood analysis and leucocytic index of intoxication did not reveal reliable differences between the clinical groups, while the differences in the clinical course of the wound process were reliable. Pain relief in patients of the experimental group came earlier and took 2,34±0,12 days against more than 4 days in patients of the comparison group ($p<0.05$).The development of phlegmon is due to the penetration of pathogenic microorganisms into the soft tissues. The causative agents are usually staphylococci and streptococci, but can be caused by other purulent microbes that penetrate into the fibre through accidental damage to the skin, mucous membranes or through blood.

Purulent phlegmon is caused by purulent microbes, staphylococci, streptococci, blue bacillus and others. When penetration into the tissues of Escherichia coli, vulgar proteus, putrefactive streptococcus develops putrefactive phlegmon. The most severe forms of phlegmon cause obligate anaerobes, multiplying in the absence of oxygen. Gas-forming spore-forming anaerobes (clostridia) and non-spore-forming anaerobes (peptococci, peptostreptococci, bacteroidetes) have extremely aggressive properties, and therefore the development of inflammation in soft tissues and its spread very quickly.

Phlegmon can also be caused by the introduction of various chemicals under the skin (turpentine, paraffin, petrol, etc.).

Rapid spread of purulent inflammation in the fibrous spaces is mainly associated with a decrease in the body's defence functions in exhaustion, long-term chronic diseases (tuberculosis, blood diseases, diabetes mellitus, etc.), chronic intoxication (eg, alcohol), various immunodeficiency states, with the ability of microorganisms to multiply rapidly, release toxins, enzymes that destroy tissues.

On the course distinguish acute and chronic phlegmon, on localisation - subcutaneous, subfascial, intermuscular, organ, interorgan, retroperitoneal, pelvic, etc. Acute phlegmon are characterised by a rapid onset, high fever (40 ° C and above), weakness, thirst, rapid appearance and spread of painful swelling, diffuse reddening of the skin over it, pain, impaired function of the affected part of the body.

Swelling increases, the skin above it reddened, glossy. When palpating, a painful thickening without clear boundaries is determined, immobile, hot to the touch. Eventually, a softening sensation can be detected in the area of the lump or a fistula develops. Often there are malignant forms when the process rapidly progresses, capturing large areas of subcutaneous, intermuscular fibre and accompanied by severe intoxication.

In the secondary development of phlegmon (osteomyelitis, purulent arthritis, purulent pleurisy, peritonitis, etc.) must identify the underlying disease.

In serous phlegmon, the fibre has a gelatinous appearance, impregnated with turbid watery fluid, on the periphery of the inflammatory process without a clear boundary passes into the unchanged tissue. With the progression of the process, the impregnation of soft tissues increases sharply, the fluid becomes purulent. The process can spread to muscles, tendons, bones. Muscles acquire a gray colour, impregnated with yellow-green pus, do not bleed.

Putrid phlegmon, characterised by the development of multiple areas of necrosis in the fibre, tissue melting, abundant purulent discharge, with a foul smell.

Complications of phlegmona Complications develop where the process is not stopped in time. This is due to either late treatment of the patient, or difficulties in diagnosis. Phlegmon, arising initially, can lead to a number of complications (lymphadenitis, lymphangitis, rye, thrombophlebitis, septicaemia, etc.). The spread of the process to the surrounding tissues leads to the development of purulent arthritis, tendovaginitis and other purulent diseases. Phlegmon of the face can be complicated by progressive thrombophlebitis of facial veins and purulent meningitis.

Conclusions: Thus, the main method of treatment of phlegmon is surgery. Early surgical intervention can prevent significant spread of purulent process and the development of general purulent intoxication.

In the postoperative period, in addition to active local treatment it is necessary to carry out intensive intravenous infusion therapy, targeted antibiotic treatment, immunomodulatory therapy

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