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MANAGEMENT AND DIAGNOSTIC RESEARCH FOR PATIENTS WITH LOW BLOOD FERRITIN AND MAXILLOFACIAL AREA PHLEGMON

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Abstract
Low iron levels in bone marrow and blood plasma cause reduced hemoglobin synthesis, which hinders the trophic development of organs and tissues. This condition is known as iron deficiency anemia.
The BRMMC's Department of Maxillofacial and Plastic Surgery received referrals for 211 patients (ages 28 to 43) who had maxillofacial inflammation. The study group comprised 118 out of the 211 patients, with the remaining 93 patients being assigned to the control group. Of the 211 patients, 52 had purulent phlegmon of the upper jaw, 51 had purulent periostitis of the upper jaw, and 44 had purulent periostitis of the lower jaw. Purulent phlegmon of the left lower jaw was present in 64 patients. a diagnosis of purulent periostitis retromolar.
Patients of the main group were recommended to rinse the mouth with a decoction of covulla root 10 times a day and, along with the traditional treatment regimen, drink Gyno-Tardiferon. After taking Gyno-Tardiferon, the patients' sleep improved, they became more alert and active, the hyperemic conditions at the incision sites disappeared (as a result of stabilizing the supply of oxygen to the tissues), and a decoction prepared from the roots, leaves and forge seeds has an analgesic, antibacterial, antiseptic and passivating effect of active microflora, occupy a positive place in restoring the health of patients.

Keywords: Blood plasma, medicinal plant, iron substance, hemoglobin, pus, tooth, odontogen.

Introduction

Iron deficiency anemia is a condition caused by low iron levels in blood plasma and bone marrow, which hinders hemoglobin synthesis and, as a result, the growth of organs and tissues. Because TTK is widely used, it has long been a serious problem. According to World Health Organization (WHO) estimates, anemia affects 2,167,400,000 people globally, of whom 80–90%, or 1,950,660,000, are affected by chronic kidney disease. The developed world has a lower indicator than the developing world. IDA affects 7,511% of childbearing age women in North America and Europe. Low pregnancy rates, high meat consumption, and appropriate, sensible nutrition all contribute to the explanation of this condition. Iron is a trace element that is used by the body in numerous metabolic processes. The body obtains most of the iron from apoptotic erythrocytes through recirculation. Additionally, when iron is consumed with food, enterocytes in the upper part of the gastrointestinal tract (GI) absorb it.
Since this component is often associated with anemia, it is essential for fulfilling the body's iron requirements. Iron is absorbed in the "duodenum+small intestine" complex, which is the proximal part of the GT, according to research using radioactive iron and D-xylose [1]. Heme cholate, which is found in meat and fish and accounts for 30–40% of all iron and is better

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absorbed, and nonheme cholate, which is found in fruits, vegetables, grains, nuts, and plant products and accounts for 60% of all iron and is comparatively poorly absorbed, are the two forms of iron that are found in food and enter the duodenum. Ceruloplasmin functions as a ferroxidase in this situation, reducing trivalent Fe3+ to Fe2+. Reduced Fe2+ is converted to Fe3+ in the basolateral region of duodenal-intestinal enterocytes by ceruloplasmin and hefestin. This procedure guarantees that no hazardous materials are released during the conversion of iron to transferrin. Hepcidin, ferroportin, hephestin, divalent metallotransporter, and cytosol are involved in the conversion of iron from food to biometal. Iron is kept in reserve, outside of cells, and inside of cells in the body [3, 6]. Iron in cells is kept in:

1) First of all, in hemoproteins (hemoglobin, myoglobin, cytochrome, catalase and peroxidase) 2) Non-heme iron-storing enzymes (succinate dehydrogenase, acetyl-coenzyme-A-dehydranase, NADNcytochrome, S-reductase and others) contain extracellular iron in transferrin and lactoferrin proteins, which carry out the function of transporting iron ions. R-globulins contain the blood plasma protein transferrin. It is produced in the liver of the human body. Trivalent iron ions are transported by the transferrin group protein lastoferrin. The proteins ferritin and hemosiderin, which are found in the muscles, spleen, and liver, are known as iron stores. When there is a cellular iron shortage, this is activated. Furthermore, 80–90 mg of labile iron core are present. This iron core can travel from the blood plasma to the interstitial space, then to the intercellular space, attach itself to the cell membrane, and then return to the plasma. An individual weighing 70 kg and in good health has 4.5 g of iron in his body, which is involved in the metabolism of various important substances. Twenty percent of the iron in the body is found in the diet. The iron that remains is found in enzymes like hemosiderin, reserve ferritin, lactoferrin, hemoglobin, and carrier transferrin. The products with the highest iron content (per 100 g) are the following: beans (12.4 g), peas (9.4 g), beef tongue (5.0 g), buckwheat groats (8.0 g), and beef liver (9.8 g). The absorption of iron from food products requires a few prerequisites. Nutrients such as succinic acid, ascorbic acid, citric acid, fructose, methionine, and cysteine help the body absorb iron more quickly than phosphates, oxalate, and calcium preservatives, which slow down the process. Iron can only be absorbed to a limited extent through food products. Iron is transferred from the intestinal mucosa to the blood by the body on its own. The iron in the mucous membrane is transferred to the blood if the blood's iron content falls. On the other hand, when iron is stored in the mucous membrane, it combines with the end of the villi and gets excreted from the body through the stool. When a woman consumes 12–15 mg of iron daily, 1-1.3 mg is absorbed; if a man consumes 18 mg, 1-1.5 mg is absorbed [3]. The maximum iron absorption is limited to 2-2.5 mg. To this is added 1 mg of depot iron, 11 mg of iron in the bone marrow, and 21 mg of iron in broken erythrocytes. 35 mg is the total amount in a single day. Iron consumption involves the production of hemoglobin (17–40 mg) and physiological absorption of 1 mg through waste products, sweat, urine, and skin epithelium. If there are imbalances in the intake and consumption of iron in the body, the lack of it in the body leads to the depletion of iron reserves in the body and the disease state. In turn, consumed plant and animal products are low in iron. Therefore, even if there is a rational diet, the body does not get enough iron. It is known that iron is transported from the intestines by special transferrin and lactoferrin enzymes. Congenital deficiency of this enzyme causes iron absorption disorders - [4]. The following order of factors causing TTK was determined. In

the first place are metrorrhagia, often IDA occurred after acute and chronic bleeding due to inappropriate use of an intrauterine device to prevent pregnancy. In the second place, the alimentary factor plays a leading role. Regular consumption of tea, coffee and milk products, which resist the absorption of iron in the body, also causes this disease. The third and fourth places are the short interval between births and frequent abortions. Now, if the number of children in the family is planned and the interval between births is more than 3 years, the fact that more than 2 abortions were performed during this period due to planning the sex of children in the family and other reasons also causes an increase in the amount of blood loss. Taking into account the above, it was noted that when mainly female patients referred to the face-jaw and plastic surgery department of BVKTTM with inflammatory diseases of the face-jaw area, they recovered in different periods, instead of recovery, in some patients, instead of recovery, the general condition worsened, and general blood tests when examined, the result of the examination showed normal indicators, and when it was decided to additionally check the level of ferritin in the blood, the level of ferritin in the blood of patients with inflammatory diseases of the face-jaw area, which healed in a short period of time, was 57.00-100.00 μg/l It was found to be equal.

In patients with IDA, inflammatory diseases of the face-jaw area also last longer than in a healthy person and can cause various complications.

The goal

Clinical-diagnostic treatment of patients with inflammatory diseases of the face and jaw in the presence of iron deficiency anemia (IDA).

Materials and methods

211 patients (patients aged 28 to 43 years) with inflammation of the maxillofacial area applied to the Department of Maxillofacial and Plastic Surgery of BVKTTM. Out of 211 patients, 118 were included in the main group, and the remaining 93 were included in the control group. Out of 211 patients, 64 patients had purulent phlegmon of the left lower jaw, 52 patients had purulent phlegmon of the upper jaw, 51 patients had purulent periostitis of the upper jaw, and 44 patients had purulent periostitis of the lower jaw. were treated with the diagnosis of retromolar purulent periostitis.

To obtain accurate research results, the following recommendations were followed:

biomaterial was strictly given on an empty stomach, food should be at least 8 hours before venipuncture;

It is important to drink clean and unsweetened water. This greatly simplifies the procedure for receiving biomaterial and reduces the risk of hemolysis (destruction of red blood cells in the test tube). Any violation of the rules for obtaining and storing biomaterial is a reason for mandatory cancellation of the analysis;

For 3 days, any medication containing iron was stopped;

30-40 minutes before taking the biomaterial, the patient should be away from physical and emotional stress. Because stress stimulates the endocrine system and affects the biochemical composition of the studied biomaterial.

Laboratory diagnosis was carried out using cadmium sulfate according to the Klochkov method, as well as immunohistochemical methods using special antisera. In practice, more than the histochemical method - Berlin Lazuri (iron sulfide) or Perls reaction was used to determine iron (III) oxide salts using potassium iron sulfide and hydrochloric acid.

The maximum amount of protein is observed in newborns. Thus, in the first 2 months, the level of ferritin in the blood reaches 600 μg / l.

Then its value gradually decreases. In the period from 2 months to six months, normal indicators are from 55 to 210 μg / l.

After six months, the indicator is quite stable up to 15 years. Its normal value varies from 8 to 143 μg/l.

Appropriate indicators after the onset of puberty in a young man: 21 - 250 μg / l.

Generally, women have slightly lower ferritin levels than men. Thus, the norm under the age of 15 is from 7 to 120 μg / l. Normal values for girls over 15 years old are from 10 to 125 μg/l.

Based on the above indications, ferritin analysis was carried out for the main group of patients, and after it was determined that its amount was relatively low (30.0-38.00 μg/l), Gino-Tardiferon, which increases the amount of ferritin in the blood, along with the traditional treatment regimen, was administered daily. It was recommended to drink 2 times for 14 days. After the ferritin analysis was carried out for patients in the control group, and its amount was found to be relatively low (30.0-38.00 μg/l), the oral cavity was treated 10 times a day with the traditional treatment procedure and furatsilin solution rinsing is recommended.

Research results and discussion:

In the analysis of the obtained results, the trend of purulent odontogenic inflammation in both compared groups is quantitatively very close to each other. In both groups, the causes of purulent odontogenic inflammation were mainly large teeth (untimely treated teeth, improperly treated teeth, pathological condition of the 8th tooth, teeth under an expired metal crown, oral cavity that the cavity hygiene is in a bad state). In the presence of purulent odontogenic inflammatory diseases in both groups, the importance of first medical and specialized aid is great, because the effectiveness of the treatment procedures, the survival of complications, and the high quality of the patient's life depend on these aspects.

In both groups of patients, the microbes that got inside the fat cell gathered around the blood vessels in it and the inflammatory process started. The development of this process took place in 5 stages: 1) swelling; 2) infiltration; 3) purulent tissue damage; 4) tissue necrosis; 5) surrounding and delimiting the resulting purulent inflammation with granulation tissue. Initially, serous inflammation was observed in the fat cells.

After the purulent hearth was cut open, the pus was removed from the cavity, the inflammatory process began to be eliminated, and the causative teeth were removed.

Conclusion:

In both groups of patients, after the operative process, the granulation tissue formed in the wall of the cavity gradually proliferated, and the necrotic tissue was partially absorbed and partially squeezed out. Normal blood circulation in the tissue was restored, and the place of the dead tissue was filled with newly formed connective tissue. Patients mainly complained of pain in

the inflamed area of varying intensity, swelling of the face and neck, and facial asymmetry. In addition, 1) limitation of mouth opening; 2) pain and limitation of chewing and swallowing movements; 3) articulation disorder in speaking and breathing; 4) complaints such as salivation disorder were also recorded. It was observed that some patients complain of general weakness, discomfort, and headache.

In both groups of patients, all clinical signs of the inflammatory process in the phlegmonous process were intensively developed. The patient has a high body temperature, strong signs of intoxication, ESR index and other negative changes in the blood are at a high level, and the maxillofacial system is more disturbed, but in the main group of patients, the above-mentioned complaints and clinical symptoms indicate that the tincture of the root of the skull After starting to rinse the cavity and take Gino-Tardiferon 2 times a day, by the 4th day, there was a positive change, first of all, the asymmetric change caused by swelling on the face disappeared, the pain the pain intensity dropped to a low frequency and the chewing function was restored.

Based on this, it should be said that after drinking Gino-Tardiferon, the patients' sleep improved, they became more alert and active, hyperemic conditions in the incision areas disappeared (as a result of the stabilization of oxygen delivery to the tissues), and from the roots, leaves and seeds of the koval the prepared decoction has analgesic, antibacterial, antiseptic and passivation properties of active micro flora, and has taken a positive place in the recovery of patients' health.

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