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CLINICAL SIGNS OF ANEMIA IN THE ORAL CAVITY AND PREVENTIVE MEASURES.

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Abstract

Signs of anemia may manifest themselves not only through general symptoms such as weakness and fatigue, but also through specific changes in the oral cavity. It is important to be able to recognize these signs, as they may be the first signals of iron deficiency or other important substances. In this article, we will look at the main signs of anemia in the oral cavity, methods of their diagnosis and approaches to treatment.

Key words

Iron deficiency, somatic diseases, dental health, caries, social significance, quality of life.

Anemia is a condition in which the level of hemoglobin in the blood drops below normal, which leads to insufficient oxygen supply to organs and tissues. Signs of anemia can manifest themselves not only in general symptoms such as weakness and fatigue, but also in specific changes in the oral cavity. It is important to be able to recognize these signs, as they may be the first signals of iron deficiency or other important substances. In this article, we will look at the main signs of anemia in the oral cavity, methods of their diagnosis and approaches to treatment [3,5].

Signs of anemia in the mouth can include a variety of changes related to iron, vitamin B12, and folate deficiencies. Key symptoms to look out for include:

1. Paleness of the mucous membranes: The mucous membranes of the mouth, gums and tongue may become noticeably paler than usual. This is due to insufficient blood supply and a decrease in the number of red blood cells. The pallor may be especially noticeable on the inner surface of the lips and gums.
2. Glossitis: Inflammation of the tongue, characterized by redness, swelling, and soreness. The tongue may become smooth, shiny, and painful to the

touch. Sometimes cracks appear on the surface of the tongue. Glossitis can be caused by a deficiency of iron, vitamins B12, and B9 (folic acid).

3. Atrophy of the papillae of the tongue: Deficiency of iron and vitamins B12 and folate can cause atrophy of the taste buds of the tongue, leading to smoothing of the tongue and loss of taste sensation. This condition is called atrophic glossitis.

4. Stomatitis: Inflammation of the oral mucosa, accompanied by the formation of ulcers and erosions. Stomatitis can be painful and make it difficult to eat and drink. Ulcers can be small or large, located throughout the mouth and cause significant discomfort.

5. Cheilosis: Cracks and ulcers at the corners of the mouth (angular cheilitis) that can be painful and take a long time to heal. This symptom is often associated with iron and B vitamin deficiencies. Cheilosis may be accompanied by a burning sensation, itching, and pain when opening the mouth.

6. Change in taste sensation: In anemia, there may be a change or loss of taste sensation, which is associated with atrophy of the papillae of the tongue and insufficient blood supply. Taste sensations may become less vivid, taste perversions are possible.

7. Burning and sore tongue: Feeling burning and sore tongue, especially when eating acidic or spicy foods, can be a sign of anemia. This condition is called glossodynia and can significantly impair a patient's quality of life.

1. Anemia can be caused by various causes, including deficiencies in iron, vitamins B12 and folate, chronic diseases and blood loss. The main causes of anemia include:

2. Iron deficiency anemia: Lack of iron in the body, which can be caused by insufficient intake of iron with food, increased need for iron (for example, during pregnancy or intensive growth), impaired absorption of iron in the gastrointestinal tract or chronic blood loss.

3. Vitamin B12-deficient anemia: Vitamin B12 deficiency, which can be caused by insufficient dietary intake of the vitamin (for example, in vegetarians and vegans), malabsorption of vitamin B12 in the stomach and intestines (for example, in malignant anemia), or diseases of the gastrointestinal tract.

4. Folate deficiency anemia: A lack of folic acid that can be caused by insufficient dietary intake of folic acid, increased need for folic acid (e.g., during pregnancy), malabsorption of folic acid in the intestine, or chronic diseases.

5. Chronic disease anemia: Anemia associated with chronic diseases such as chronic infections, inflammatory diseases (e.g. rheumatoid arthritis), or malignant tumors.

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6. Blood loss: Chronic blood loss associated with menstruation, peptic ulcer disease, hemorrhoids, polyps or tumors of the gastrointestinal tract.

To diagnose anemia, you need to consult a doctor who will conduct the necessary research and determine the cause of the deficiency. Diagnostics includes the following stages:

1. history and physical examination: The doctor will listen to the patient's complaints, assess the condition of the mucous membrane of the mouth, tongue and gums, and conduct a general examination. It is important to inform the doctor about all symptoms, the presence of chronic diseases, nutritional characteristics and possible blood loss. 2. laboratory tests:

Complete blood count: Determination of hemoglobin level, red blood cell count, and other parameters such as hematocrit, mean red blood cell volume (MCV), and mean red blood cell hemoglobin (MCH). These indicators will help to identify the presence and degree of anemia.

Serum iron and ferritin levels: Assessment of body iron stores. Low ferritin levels indicate iron deficiency.

Vitamin B12 and folate levels: Check for a deficiency of these vitamins. Low levels of these vitamins may indicate appropriate types of anemia.

Urinalysis: To rule out possible kidney disease and other systemic conditions.

3.Additional studies: Depending on the results of the primary tests, additional studies may be ordered, such as tests to detect chronic diseases, endoscopic examinations to identify sources of blood loss, and other tests. For example, gastroscopy and colonoscopy may be necessary to identify sources of chronic blood loss in the gastrointestinal tract [2,5].

1. Treatment of anemia is aimed at replenishing the deficiency of iron, vitamins B12 and folate, as well as eliminating the causes that caused anemia. Major treatment approaches include:

2. Nutrition correction

3. 1. Iron-containing foods: The inclusion of iron-rich foods such as red meat, liver, fish, poultry, legumes, green vegetables, nuts and seeds in the diet. Iron from animal products (heme iron) is better absorbed than iron from plant sources (non-heme iron).

4. 2. Foods rich in vitamin B12: Meat, fish, eggs, dairy products. Vitamin B12 is found exclusively in animal products.

5. Foods rich in folic acid: Green leafy vegetables, citrus fruits, legumes, nuts, seeds. Folic acid is essential for normal hematopoiesis and cell division.

Drug treatment

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1. Iron preparations: The doctor may prescribe iron preparations for oral or intravenous administration depending on the degree of deficiency and tolerability. Iron preparations should be taken on an empty stomach or with vitamin C to improve absorption.

2. Vitamin B12: For vitamin B12 deficiency, injections or tablets are given to make up for the deficiency. Depending on the cause of the deficiency, the therapy can be lifelong.

3. Folic acid: Folic acid preparations are prescribed in case of folic acid deficiency. Treatment usually lasts several months.

1. Pain relievers: Local anesthetics and pain gels may be prescribed to reduce pain and discomfort in the oral cavity. These remedies help to temporarily relieve symptoms.

2. Antiseptic rinses: Rinses with antiseptic solutions help reduce inflammation and prevent infection of ulcers and erosions. Rinses should be done several times a day.

3. Moisturizers: The use of moisturizers and gels to reduce dryness and discomfort in the oral cavity. These products help maintain moisture in the mucous membrane and prevent the formation of cracks and ulcers.

If anemia is caused by chronic diseases such as inflammatory bowel disease or peptic ulcer disease, treatment of the underlying cause is necessary to normalize iron and vitamin levels in the body. This may include drug treatment, surgery, or other approaches depending on the specific disease.

1. Prevention of anemia and its manifestations in the oral cavity

2. Balanced nutrition: Ensuring adequate intake of iron-containing foods, vitamins B12 and folate. It is recommended to include in the diet a variety of foods rich in the necessary nutrients.

3. Regular medical examinations: Preventive examinations and laboratory tests help to identify iron and vitamin deficiencies in a timely manner. Regular visits to the doctor allow you to monitor your health and prevent the development of anemia.

4. Health monitoring: Treatment of chronic diseases that can lead to iron and vitamin deficiencies. It is important to monitor the condition of the gastrointestinal tract, kidneys and other organs.

5. Oral hygiene: Regular brushing, flossing, and mouthwashes help maintain mucosal health and prevent infections from developing. It is recommended to visit the dentist at least twice a year.

6. Lifestyle: Leading a healthy lifestyle that includes physical activity, avoiding bad habits and following a daily routine contributes to overall health promotion and anemia prevention.

Anemia can present with a variety of symptoms, including specific changes in the oral cavity. Timely diagnosis and treatment of anemia helps to avoid serious complications and restore health. It is important to monitor your diet, undergo regular medical examinations and, if necessary, consult a doctor for qualified assistance. Taking care of your health and the health of loved ones is the key to a long and active life [1,8].

REFERENCES:

1. Grigoryan A. S., Grudyanov A. I., Rabukhina N. A., Frolova O. A. Periodontal diseases. – M.: MIA, 2004. – 97 p.

2. Grudyanov A.I. Periodontal diseases. – M.: MIA, 2009. – 336 p.

3. Kochkonyan T. S., Gasparyan A. F., Ladutko A. A., Bykov I. M., Shalaeva G. V., Bykova N. I. Processes of lipid peroxidation and the state of the antioxidant system of oral fluid in various degrees of secondary edentia // Kuban Scientific Medical Bulletin. – 2010. – No. 2 (116). – P. 46–50.

4. Leontiev V.K. Structural properties of mixed saliva in individuals with early forms of inflammatory periodontal diseases // Stomatology. - 2003. - No. 4. - P. 32-34.

5. Obraztsov V.L. Dental health: essence, importance for quality of life, evaluation criteria // Stomatology. - 2006. - No. 4. - P. 41-43.

6. Pavlyuchenko I.I., Bykov M.I., Fedosov S.R., Basov A.A., Bykov I.M., Morgoev A.E., Gaivoronskaya T.V. Comprehensive assessment of the state of the pro-antioxidant system in various biological environments in surgical patients with purulent-septic complications // Advances in modern natural science. – 2006. – No. 6. – P. 82–83.

7. Safuanova G. Sh., Chepurnaya A. N., Bakirov A. B. Results of the study of receptors for immune activation (HLA-DR, CD25, CD71), apoptosis (CD95) and stem cells (CD34) in patients with iron deficiency anemia // Klin. lab. diagnostics. - 2002. - No. 10. - P. 15.

8. Storozhuk P. G., Storozhuk A. P., Bykov I. M. The property of erythrocytes to suppress the growth and reproduction of pathogenic and opportunistic microorganisms (Discovery. Diploma No. 251.) // In the book: Potocki V. V. Registration of scientific discoveries. - M., 2004. - P. 276-277.

9. Ekiz C., Agaoglu L., Karakas Z., Gurel N., Yalcin I. The effect of iron deficiency anemia on the function of the immune system // J. hematol. – 2005. – v. Sharipova Gulnihol Idiyevna. DISCUSSION OF RESULTS OF PERSONAL STUDIES IN THE USE OFMIL THERAPY IN THE TREATMENT OF TRAUMA TO THE ORAL MUCOSA// European Journal of Molecular medicinevolume 2, No.2, March 2022 Published by ejournals PVT LTDDOI prefix: 10.52325Issued Bimonthly Requirements for the authors.

10.Sharipova Gulnihol Idiyevna. THE EFFECTIVENESS OF THE USE OF MAGNETIC-INFRARED-LASER THERAPY IN TRAUMATIC INJURIES OF ORAL TISSUES IN PRESCHOOL CHILDREN//Academic leadership. ISSN 1533-7812 Vol:21Issue 1