

Differential Diagnostics, Treatment and Prevention of Hyperesthesia Oral Cavities

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Abstract:

The stages of differential diagnosis of oral hyperesthesia are presented, including collecting an anamnesis of the onset and development of the disease, assessing the quality of existing dentures, potentiometry of metal inclusions in the oral cavity, allergy testing, mycological examination of the contents of the oral cavity, study of the height of the lower part of the face, analysis of the results of examination of patients with somatic diseases. Recommendations are also given for treatment and prosthetics. Examination data from 179 patients aged 25 to 75 years were analyzed.

Keywords: hyperesthesia, allergy testing, metal inclusions

Introduction

Hyperesthesia is a state of increased sensitivity. Hyperesthesia of oral tissues has subjective and objective signs of local and general manifestations.

Subjective characteristics include:

- burning of lips and tongue
- tingling in the soft tissues of the mouth
- pain in the tongue, mucous membranes hard and soft palate
- feeling of discomfort in the mouth
- dryness or increased salivation
- sore throat
- feeling of a battery.

Objective signs include:

- chronic irritation of the oral mucosa in the form of erosions, hyperemia, ulcerations
- increased atrophic or hypertrophic changes in the oral mucosa
- various forms of gingivitis and stomatitis
- leukoplakia
- lichen planus and candidiasis.

Common manifestations include:

- headache
- dizziness
- fatigue
- indigestion
- sleep disturbance
- heartache
- neurological disorders
- fear.

Similar symptoms can appear in other pathological conditions of the body (achylic gastritis, liver disease, menopause disorders in women, diseases of the central and peripheral nervous system, oral candidiasis, shortening of the lower part of the face). A burning sensation in the mouth can be a symptom of common diseases. However, in the absence of general diseases and the presence of denture materials in mouth, the main cause should be considered the latter. The clinic may manifest itself as single symptoms and in various combinations, occur constantly or with periods of remission of varying duration. The intensity may vary depending on the time of day and other factors. Variety of causes and one-sidedness of clinical manifestations of hyperesthesia require different approaches to solving issues diagnosis, treatment and prevention.

The differential diagnostics we carry out include collecting an anamnesis of the onset and development of the disease, assessing the quality of existing dentures, potentiometry of metal inclusions in the oral cavity, allergic testing, mycological examination of the contents of the oral cavity, studying the height of the lower part of the face, and analysis of the results of examination of patients with somatic diseases.

We analyzed survey data from 179 patients aged 25 up to 75 years of age, with complaints of a general and local nature that appeared after prosthetics.

Intolerance to metal dentures in the oral cavity is more often observed in women. Of the 179 patients, intolerance was detected in 137 women and 42 men. With age, the symptoms of intolerance increase.

Allergy testing

Since the body's allergic reaction to metal prostheses develops against the background of galvanic phenomena, testing should be a mandatory step in the differential diagnosis of forms of hyperesthesia with intolerance to metal prostheses.

To determine the allergic state of the body, the following method is used:

The reaction of inhibition of the natural migration of leukocytes into the oral cavity. Allows you to record the patient's reaction to the allergen. Using this method, it was found that rinsing patients' mouths with allergen solutions inhibits the natural migration of neutrophils into the oral cavity. The test is easy to perform, highly sensitive and specific. The test is assessed as weakly positive when the number of cells decreases in the range of 22–29%, strong - when the number of cells decreases by more than 30%.

Allergy testing allows you to determine which material causes an allergy. This is especially important when repeating prosthetics, as well as when installing prosthetics for the first time in patients with a burdened allergic history, in order to select a material (alloy) for manufacturing prostheses.

Potentiometry of metal inclusions in the oral cavity

When one metallic inclusion is introduced into the oral cavity, galvanic currents may appear. Such currents determined indirectly by measurement the potential values of all existing metal inclusions in the oral cavity and their differences. Definition galvanic currents makes it possible carry out differential diagnosis of hyperesthesia in case of intolerance metal inclusions.

One of the available research methods is potentiometry. Although she doesn't is an indicator of the stability of metal alloys in a given environment. However, the value of the potential and the nature of its formation over time can provide a number of important information about the behavior of the metal under appropriate conditions. This method is useful for assessing the ability of alloys to restore a passive state (brushing teeth, eating food).

It is considered informative to measure the potential of each metal inclusion (prosthesis) and according to measurement data determine the potential difference between them. This technique allows you to construct a series of activity of prostheses, identify electrochemically active inclusions and determine the maximum potential difference as the most significant in the cause of the development of galvanosis. According to the literature and our data, it has been established that if the potential difference between metal prostheses exceeds 74 mV, then it can be the cause of the development of galvanosis and hyperesthesia.

To measure potentials, high-resistance voltmeters with an internal resistance of more than 10 megohms and a silver-silver chloride reference electrode with an intrinsic potential of +220 mV are used. We used a combined electrical measuring instrument MASTECH.

Mycological studies oral contents

Research confirms or exclude oral candidiasis in the development of symptoms of hyperesthesia of metal dentures. With an increase in the number of patients using dentures, there is an increase in diseases of the oral mucosa caused by candidiasis. Meet cases of candidiasis when using removable laminar dentures. The base material (plastic) creates favorable conditions for the development of fungi, especially as he ages.

People using removable dentures patients complain of burning of the mucous membrane under dentures (in area of the hard palate), - upon examination, sharp redness can be observed prosthetic bed. Complaints of burning tongue, paresthesia, hyperesthesia, metallic taste in the mouth. Upon examination, swelling and folding of the tongue are revealed, areas of hyperkeratosis along the line of closure of the dentition both on the mucous membrane of the cheeks and on the lateral surface of the tongue, abundant plaque on the back of the tongue, filiform papillae - "hairy tongue", a combination of the severity of filiform papillae with their the absence of language on a significant surface - "geographical language".

The characteristic picture gives the right to presumably make a diagnosis of candidiasis. For more in-depth specialized examination and treatment, patients with signs of candidiasis should be referred to appropriate medical institutions.

Orthopedic treatment consists of replacing old dentures after complete and thorough sanitation of the oral cavity. In prosthetics, preference should be given to solid-cast and, if possible, combined structures using alloys of both base and noble metals.

Study of the height of the lower third of the face

When teeth are worn out, partially edentulous with the absence of antagonists, when all teeth on one or two jaws are removed, conditions are created for the unhindered movement of the lower jaw to the upper jaw. This leads to a reduction in the lower third of the face and disruption physiological and morphological norms in the dental system. The normal size of the lower third of the face is characterized by the presence of the lower jaw in a dynamic balance of the muscles that raise and lower the lower jaw. In this case the distance between open teeth is 2–4 mm. The articular head is located on the slope of the articular tubercle at its base. This position is called relative physiological rest. The vertical size of the face corresponds to aesthetic and physiological standards. The closure of the dentition in the position of central occlusion reduces the height of the lower third of the face by 2–4 mm. The articular head moves slightly along the slope of the articular tubercle upward and posteriorly (within normal limits).

As the lower third of the face shortens the lower jaw approaches the upper. The articular head is displaced to a greater extent posteriorly and upward. Unhindered displacement of joints heads can lead to excessive pressure on the tissue of the posterior wall of the glenoid cavity, where the tympanic string (chorda tympani), irritation which can cause pain and burning in the tongue and pharynx, the phenomenon of hyperesthesia. Shortening the lower third of the face can lead to a change in the taste sensitivity of the tongue to sweet, salty, and bitter.

Elimination of this pathology should be aimed at normalizing the position of the articular head in the area of the slope of the articular tubercle. Normalization is achieved by restoring the height of the lower part of the face and rational occlusal contacts through prosthetics.

It is necessary to begin treatment with the selection of occlusal height and the manufacture of temporary (provisional) diagnostic prostheses. Prosthetics performed by permanent structures after receiving positive results of prosthetics on provisional structures. To eliminate possible errors in treatment, it is recommended to temporarily fix permanent structures for 3–4 weeks. If for during this period the symptoms of the disease are not resume, treatment can be considered finished. The dentures are permanently fixed.

The relationship between galvanism and somatic diseases

An important factor in the manifestation of hyperesthesia is the general condition of the body and, in particular, the presence of somatic diseases that affect receptor apparatus of the oral cavity and the sensitivity of the oral mucosa to various stimuli, including electric current. Most often this connection is observed in diseases of the gastrointestinal tract (GIT), liver, cardiovascular diseases (CVD), allergic conditions and their combination.

Of the 179 examined, the potential difference was determined in 152 patients. Highest correlation rates found in patients with several somatic diseases (there were 96 people). In second place in terms of number is the group of patients with gastrointestinal and liver diseases - 47 people. Further followed by patients with allergies diseases and CVD. Allergic diseases were identified in 23 people (6 men and 17 women).

The phenomena of galvanism were found in 27 patients who had no somatic pathologies (23 women and 4 men).

Patients with physical illnesses should be referred for consultation and treatment to appropriate specialists. With positive results in the treatment of general diseases, we periodically measured the magnitudes and potential differences and obtained positive results. At the end of the course of treatment of general diseases, orthopedic treatment was performed.

In resolving issues of diagnosis and treatment of oral hyperesthesia, an individual approach is required, taking into account all examination data.

References

1. Axell T., Nilner K.T., Nilsson B. // Swed. Dent. J. – 1983. – №7. – P. 169–180.
2. Kuserova H., Dostalova T., Prochazkova J. et al. // Gen. Dent. – 2002. – V. 50. – №1. – P.62–65.
3. Muller A.W.J., Van Loon L.A.J., Davidson C.L. // J. Oral Rehabilitation. – 1990. – V.17. – P.419–424.