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The Effectiveness of the Use of Fluorine-Containing Filling Material Admira Protect In The Treatment of Tooth Hypersensitivity in the Cervical Part of the Tooth

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Abstarct: The problem of preventing diseases of hard dental tissues occupies an important place in modern therapeutic dentistry, so the search for agents that promote enamel remineralization and eliminate tooth hypersensitivity remains relevant. Traditionally, toothpastes containing high concentrations of fluoride ions and fluoride-containing filling materials are used to prevent dental diseases and eliminate hypersensitivity.

Hypersensitivity of hard tissues of the teeth, occurs quite often in violation of the structure of teeth's hard tissues (caries process, increased abrasion of dental tissues, enamel erosion, wedge-shaped defects, etc.), periodontal diseases, and in some cases without visible changes in teeth .

Keywords: hypersensitivity of dental hard tissues, remineralizing therapy, fluoride-containing filling material Admira Protect.

The relevance of this article lies in the fact that in the group of elderly patients (50-70 years old) with complaints of tooth hypersensitivity in the cervical part of the tooth, there was used the method of treating this disease with the help of fluoride-containing filling material Admira Protect.

The article aims to determine how effective is the method of treating hypersensitivity of hard tissues of teeth in the cervical area using fluoride-containing fillings.

Hypersensitivity of the teeth (increased sensitivity of tooth tissues to mechanical, chemical and thermal stimuli) is an extremely common phenomenon, as it accompanies many dental diseases. According to the prevalence, they are distinguished - localized (sensitivity in a small number of teeth (from 1 to 6)) and generalized. Localized hypersensitivity can also be associated with gingival recession. Distinguish between essential hypersensitivity - increased sensitivity of teeth to various stimuli, not accompanied by morphological changes in the dental system. The hydrodynamic theory formulated by Brannstrom explains the sensitivity of dentin by the morphofunctional features of the tooth. Most cases of dentin hypersensitivity are caused by an acceleration of CSF flow in the dentinal tubules, which leads to displacement of odontoblast cells and irritation of nerve endings in the pulp. Clinically, hypersensitivity of the teeth manifests itself in a variety of ways. Typically, patients complain of intense, but quickly passing pain from the action of various stimuli.

Purpose of the study: to study the effectiveness of therapeutic and preventive measures using fluoride-containing filling material Admira Protect**,** in the localization of tooth sensitivity in the cervical part of the tooth.

Materials and methods of examination:

The study involved 40 people suffering from hyperesthesia of the teeth, aged 50 to 70 years. All of them had generalized hypersensitivity of the teeth (the process covered more than 25% of the teeth present in the oral cavity).

An individual approach to treatment was implemented, based on the results of clinical and laboratory studies. In all patients, deep defects were closed by one-stage filling using fluorine-containing filling material Admira Protect. Admira Protect is a HEMA (hydroxyl methyl methacrylate) desensitizer

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containing sodium fluoride and has a desensitizing effect. For greater effectiveness, calcium-containing therapeutic and prophylactic preparations were administered orally to normalize mineral metabolism at the local and general level.

Prior to the start of the clinical trial, after 3 and 6 months, the following clinical and laboratory parameters were studied in patients: tests for tooth sensitivity - cold according to Schiff and tactile. The latter is carried out by touching the trowel to the sensitive area of the tooth. The interpretation of the obtained results is as follows: 3 points - pain response to a light touch - high sensitivity; 2 - points - pain response to light tapping on the tooth with an interval of 2 seconds - average sensitivity; 1 - point - response pain reaction to intense tapping on the tooth with an interval of 0.5 - 1 sec. - weak sensitivity: 0 - points - no reaction to touch and tapping - no sensitivity (negative result).

Results. Studies have shown that patients participating in the study had signs of generalized hyperesthesia before the start of the study, and complaints were of increased tooth sensitivity, which occurs mainly to cold and tactile stimuli. The study of these tests showed the presence of high sensitivity of the teeth. Most individuals were given the highest score of 3, and a small number of patients were given a score of 1 for poor sensitivity.

In the group of patients with generalized hyperesthesia of the teeth (sensitivity of the cervical part of the tooth), after 3 months, 40% of people (only those with varnished teeth) indicated that tooth sensitivity is sometimes manifested. At the same time, a positive response to the Schiff test was detected in 24 people (no more than 1 point in all, and in 16 people (1 point each) when studying a tactile test. Studies conducted after 6 months showed a lack of tooth sensitivity in all individuals and tested negative.

Conclusions: Based on the results of the research, it was concluded that the use of the therapeutic and prophylactic fluoride-containing filling material Admira Protect, taking into account the localization of sensitive areas in the cervical part of the teeth with generalized hypersensitivity, had an effective impact, consisting in a pronounced desensitizing effect.

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