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# MODERN SCIENCE: PROBLEMS AND INNOVATIONS



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#### THE CONTROL OF TEETH HYPERESTHESIA IS THE FIRST STEP OF COORDINATED INTERVENTIONS IN THE REHABILITATION PROCESS OF PATIENTS WITH GENERALIZED PARODONTAL DISEASE

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Introductions. Generalized parodontal disease remains one of the most complex forms of dental pathology in consequence of its high prevalence, persistent growth tendency, duration of its course and the general negative impact on the body. One of the most difficult issues is the problem of planning the sequence of stages, controlling and predicting treatment results. A special role in the treatment of generalized parodontitis is determined by approaches to disease management (disease control), in which the "motivation", the patient's own efforts in maintaining oral health and compliance with the doctor are important. The oral hygiene plays the critical role in this process. However, the prominent gum recession is accompanied by teeth hyperesthesia most often. Such manipulations as teeth deposits removal, curettage, control of occlusal relations, by selective grinding of teeth hard tissues against the background of functional overload and pathological mobility of teeth increase hyperesthesia even more. Therefore, the elimination of teeth hypersensitivity should be the first stage of coordinated interventions in the rehabilitation process of patients with generalized parodontal disease, which will allow the dental system to adapt to changing conditions during treatment as soon as possible.

**Aim.** The evaluation of the clinical effectiveness of desensitizers based on Ormaker to eliminate teeth hypersensitivity as the first step of coordinated interventions while general parodontal disease patients' rehabilitation. **Materials and methods.** The clinical studies were performed among 39 patients aged from 25 to 44 years (24 women and 15 men) with chronical generalized parodontitis with moderate to high severity (according to AAR classification, 2018: degree II and III, Class C is high level of progression) with different etiologies of teeth hyperesthesia. A 4-point scale was used to assess clinical effectiveness: 4 points for unbearable pain, 3 points for medium intensity pain, 2 points for mild pain and 1 point for no pain. The full desensitizer of the 3rd group - a light-curing varnish based on Ormaker was used for the treatment of hyperesthesia. The first pain sensitivity study was performed before the treatment - (S1), the second one immediately after using Admira Protect - S2, the third control evaluation (CE 1) after 1 week, the fourth one - (CE 2) after 1 month, the fifth one (CE 3) after 3 months. To assess the effectiveness of the hygienic condition after the elimination of tooth hyperesthesia, a generally accepted index assessment was used.

All the patients were divided into two groups: the main group consisted of 15 people who were treated with desensitizer and the control group - 14 people who were not treated for teeth hyperesthesia at all. The assessment of oral cavity hygienic state was carried out using (indexes): 1 - index O`Leary (%); 2 - IP1 Ind. Silness-Loë; 3 - OHI-S Greene a.Vermillion. To estimate the intensity of parodontal inflammation the parodontal index - Ind. Russel - was used.

**Results and discussion.** After the first use of Admira Protect desensitizer for hyperesthesia, the pain reactions disappeared in 94% of cases and the result remained stationary after a week had passed. The constant result was preserved during the control examination after 1 and 3 months. The analysis of parodontal condition revealed strongly marked and stable decrease of parodontal inflammation and improvement of oral hygiene. In the investigated group O`Leary index decreased for 56,5% after 1 month, this means it made 43,5% of pre-treatment index. The thickness of the plaque decreased for 51.2% and its area for 66.2%, as it was evidenced by IP1 and OHI-S. Ind.Russel decreased to 50.9% and reached 49.1% of the initial level. The persistent effect is observed 3 months after treatment - the index of O`Leary was 57.67%, IP1 (Ind. Silness-Loye) - 56.44% and OHI-S (Ind. Greene a.Vermillion) was

44.97% from the index before treatment. The Ind.Russel was below the baseline for 41.9%. In comparison these indicators were much lower in the control group. Accordingly, in 1 month, the O'Leary index was already 81.14%, IP1 (Ind. Silness-Loey) - 87.6% and OHI-S (Greene a.Vermillion) - 81.14% of the pre-treatment rates. The Ind.Russel decreased only for 24.6% to 75.4% of its initial level. In 3 months, O'Leary index was 91.1%, IP1 was 71.1% and OHI-S was 91.7% of pre-treatment indexes. The Ind.Russel was only 9.7% below the baseline.

**Conclusion.** The usage filled desensitizer based on Ormaker allows to eliminate completely or significantly reduce the hypersensitivity of teeth hard tissues after single use. This improves cavity hygiene and reduces the intensity of inflammation, obviously increasing the patient's motivation. This will increase patient's confidence, will make many therapeutic and preventive manipulations easier, and promote better communication between patient and doctor during the treatment. By this means elimination of teeth hyperesthesia is the first step to "disease management" during the rehabilitation of patients with generalized parodontal disease.

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