

## **SCENAR THERAPY APPLICATIONS**

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### **Use of the External Toothbrush Electrode for the Prevention and Treatment of Periodontal Diseases**

The achievements of SCENAR therapy in the treatment of many diseases and conditions are evident, and its' area of application constantly grows. For treatment of cases where direct application of a SCENAR device is not possible, a number of external electrodes has been developed and successfully used for treatment of various pathologies.

This article is dedicated to the treatment of periodontal diseases, using a special SCENAR electrode – a toothbrush with parallel silver electrodes installed below the bristle line.

**Periodontal diseases** have been known since antiquity and are extremely common, just like tooth decay. The periodontal tissues include the alveolus, periodontal ligaments and the gum.

If only the gum is affected, the disease is termed gingivitis, if deeper structures are involved, the condition is termed periodontitis.

The frequency of those diseases is universally high and growing – according to WHO, 100% of adults and 50% of children display at least some signs of periodontal pathologies. Tooth loss caused by these diseases in patients over 40 years old is more frequent than tooth decay. From the US Dentistry Association data (since no comparable research data is available for our own country) 60-70% of tooth loss after 40 years of age is due to periodontal problems. Of 111 million adult Americans, 20 million have total tooth loss, of those 75% - due to periodontal diseases. The problem with tooth loss is aggravated by the disruption of chewing, which causes digestive issues and more complicated problems in other systems.

Decay products accumulating in areas of inflammation and tissue destruction can cause autoimmune and allergic diseases, and an increased susceptibility to infections.

Periodontal diseases exhibit an age pattern; in younger patients gingivitis is common, with age deeper tissues become more frequently involved, till the alveolar structures become destroyed, leading to tooth loss.

If, in addition to age such factors as social (availability of dental care), level of health awareness, and geographic specifics of regions are considered, it becomes clear how important the measures for preventing gingivitis and periodontitis are for our country.

Many have already seen for themselves the general and local effects of SCENAR treatment. The reason why SCENAR was proposed for periodontal treatment is because those tissues are richly supplied with blood vessels, and the vascular state of the periodontal area is extremely important for pathological development. Also, since those tissues are very richly innervated, the linkage between the general state of the organism and periodontal structures is very strong; many adverse conditions are reflected in the state of teeth and surrounding structures, weakening them.

A group of 14 patients aged 15 to 62 was observed, all with at least 6 months of periodontal disease symptoms. Some of the patients (5 persons) complained of itching, pain and bleeding of the gums increasing during tooth brushing or when biting on solid foods. General weakness, temperatures of up to 38C were observed in such cases. Gums on inspection were swollen and hyperemic, bleeding on touch. Use of Metrogil-Denta before SCENAR therapy improved the condition of gums but failed to stop the bleeding.

9 patients were diagnosed with periodontitis, since pain under intense chewing and teeth movement under pressure was observed. Swelling, sensitivity and bleeding was observed in their gums. In 6 patients the condition was general, in 3 limited to areas of tooth anomalies. No visible periodontal pockets were found.

All patients were offered the use of the SCENAR toothbrush twice per day, for 2-3 weeks, brushing their teeth after breakfast and before bed for at least 2-3 minutes. The SCENAR impulse intensity was to be comfortable (slight pricking sensation), no specific recommendations on toothpaste selection was given.

Considering the sensitivity and swelling of affected gums it was recommended in the first stages to not attempt vigorous massaging motions, but to keep the brush near the gum, slowly moving it over the jaws and mouth cavity. During these procedures many cases of bleeding were reported, but after rinsing the mouth they stopped or subsided.

After 5-7 days of treatment the incidence of bleeding decreased to a statistically valid level, in some cases stopping completely. The patients reported their sensations as slight "contraction" of the gum and a fresh sensation in the mouth. The only patients reporting worsening of their condition after the initial periods were 3 young patients that brushed their teeth too vigorously.

On completion of the course, all patients reported a significant improvement in their periodontal condition; in most cases swelling, pain and bleeding were gone.

The most important result was the improvement of tooth fixation, with no movement under pressure or pain under sufficient chewing loads observed after treatment. The research was performed under constant dentist control; it must be noted that all patients received only local SCENAR treatment, without additional other therapy, including general areas.

This demonstrated the efficacy of SCENAR treatment in gingivitis and periodontitis using the toothbrush electrode.