THE RESEARCH STUDY

"COMPREHENSIVE TREATMENT OF SENSORINEURAL HEARING LOSS USING SCENAR DEVICES"

(by A. P. Vasilyeva, MD/Otorhinolaryngologist- edited and translated)

Sensorineural hearing loss (SNHL) remains a relevant clinical problem to this day. Unfortunately, traditional treatment methods are not always sufficiently effective; therefore, the search for new and modern therapeutic approaches continues.

Sensorineural hearing loss is a common condition in otorhinolaryngology, which is associated with a wide range of adverse factors leading to hearing impairment and deafness.

The development of sensorineural hearing loss is influenced by:

- infectious diseases (influenza and acute respiratory viral infections, mumps),
- systemic disorders (arterial hypertension),
- vascular disorders (vertebrobasilar insufficiency, cerebral atherosclerosis),
- stress,
- mechanical, acoustic, and barotrauma,
- exposure to industrial and household toxins,
- certain medications (aminoglycoside antibiotics, some antimalarial and diuretic drugs, salicylates).
- occupational factors.

Clinical manifestations of sensorineural hearing loss primarily include reduced hearing acuity, often accompanied by tinnitus, dizziness, nausea, and vomiting.

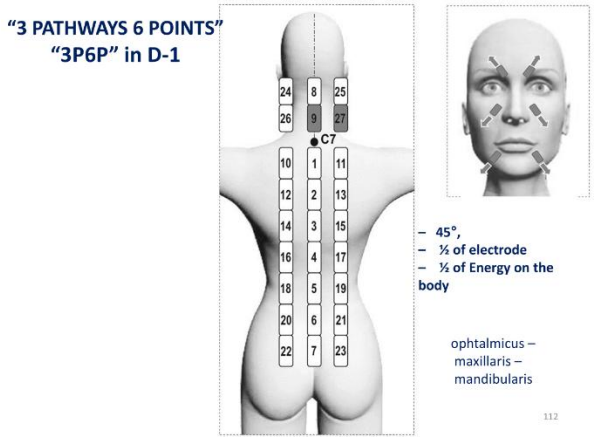
The treatment plan for sensorineural hearing loss is individualized for each patient and is determined by the etiology, duration of the disease, and the presence of comorbid conditions. The effectiveness of pharmacological therapy and stabilization of positive clinical outcomes can be enhanced by including non-pharmacological methods in the treatment program, such as SCENAR device.

SCENAR device (Self-Controlled Energy Neuro-Adaptive Regulator) is successfully used by practicing physicians for the treatment of a wide range of conditions. Due to biological feedback, the therapist can select the most effective treatment zone, ensuring an individualized therapeutic approach in each case. SCENAR therapy is a revolutionary neuroadaptive therapeutic method, based on principles of electrotherapy, reflex therapy, and neurotherapy.

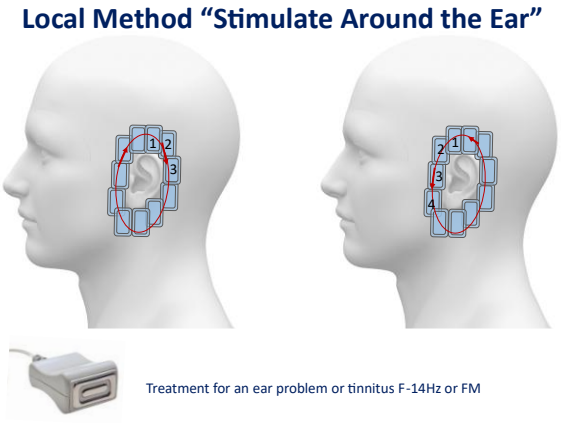
The primary objective of this study was a comparative evaluation of the effectiveness of comprehensive conservative treatment of sensorineural hearing loss using SCENAR device according to an approved protocol.

Patients with chronic bilateral sensorineural hearing loss were treated in courses. Each course consisted of 7 to 10 procedures, with the total number of courses determined individually based on physician recommendations. Patients underwent 5 to 7 courses of SCENAR therapy, delivered in Individually Dosed Mode. The interval between the first and second courses was 14 days, and 20–25 days between subsequent courses.

The treatment protocol included:

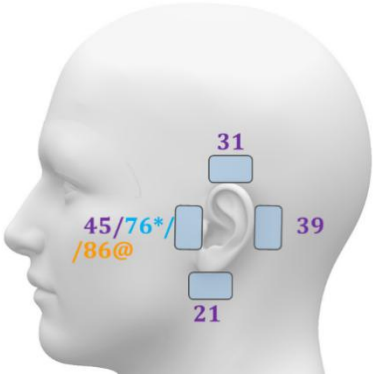


Impact on these distinct areas of skin causes general non-specific adaptive reactions of the body. Systemic regulation Zones are areas that are common to all complaints and every person. SCENAR treatment of these zones influences the body's nervousness, endocrine and immune systems.

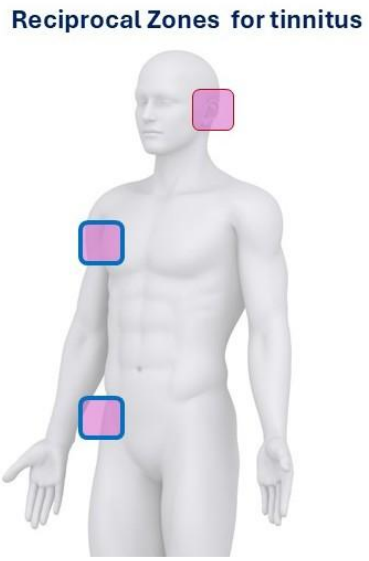


-stimulation of the periauricular area bilaterally.

-stimulation of Collar Zone.



-stimulation of the point corresponding to the maximum perception of noise or ringing in the head (determined by the attending physician based on clinical examination).



The duration of each procedure was 15 minutes.

After the first 2–3 SCENAR procedures, patients subjectively reported early signs of hearing improvement, including:

- reduction of constant tinnitus.
- improved sound perception.
- increased sensitivity to loud sounds.
- perception of previously inaudible sounds.
- improved speech discrimination.

For objective evaluation of treatment outcomes, screening audiometry was performed during and after therapy. Threshold tonal audiometry and whisper and conversational speech tests were conducted before and after treatment. Blood pressure was continuously monitored in all patients.

The following results were obtained:

- **89.7%** of patients reported a reduction in tinnitus.
- **72.4%** of patients with arterial hypertension showed decreased blood pressure and required lower doses of antihypertensive medications.
- **96%** of patients demonstrated an increase in whisper and conversational speech perception distance by 1–1.5 meters.
- **89.7%** of patients showed a 5–10 dB improvement in sound perception at frequencies of 500, 1000, 2000, and 4000 Hz on screening audiometry.
- **96%** of patients demonstrated a 5–15 dB improvement in low-frequency hearing thresholds on tonal audiometry.

Evaluation of treatment outcomes indicates high effectiveness of SCENAR therapy when included in comprehensive treatment of sensorineural hearing loss. Further refinement of SCENAR therapy protocols and the development of new treatment approaches are necessary, as this contributes to a favorable prognosis in patients with sensorineural hearing loss of occupational and other origins.

Source: *Material from the electronic library of ZAO OKB RITM, September 27, 2008.*