

TREATMENT OF BACK PAIN WITH SCENAR DEVICE

Back pain is pain felt in the back that usually comes from the muscles, nerves, bones, joints, or other structures of the spine. Back pain can be sudden or chronic; constant or intermittent, dull or sharp, stabbing or burning. It can stay in one place or radiate to other areas - to the arms and hands, as well as the legs or feet. It may include symptoms other than pain. These symptoms may include tingling, weakness, or numbness. Back pain is one of the most common complaints in life. Acute low back pain is the fifth most common reason for seeking medical attention.

The spine is a complex interconnected network of nerves, joints, muscles, tendons, and ligaments, all of which are capable of causing pain. Large nerves that originate in the spine and travel to the legs and arms can cause pain that radiates to a limb.

Nonspecific back pain is the most common type of back pain. About 19 out of 20 cases of sudden onset (acute) low back pain are classified as non-specific.

Nerve root pain (often referred to as sciatica) occurs in less than 1 in 20 cases of acute low back pain. Nerve root pain means that the nerve exiting the spinal cord (nerve root) is irritated or compressed. (Many people call this a pinched nerve.) You feel pain along the course of the nerve. Therefore, you usually feel pain down the leg, sometimes up to the calf or foot. Leg or foot pain is often worse than back pain

For back, joint or muscle pain, save yourself a lot of time, money and suffering - try SCENAR therapy.

SCENAR® therapy is a gentle biofeedback method to relieve pain and improve mobility. In the area of pain, in the resistance to the current of the affected tissue, the stimulating impulses delivered by SCENAR are measured and precisely regulated.

Behind this method is the activation of the self-healing forces of the body through a variety of connections between the nerve receptors of the skin and organs or the musculoskeletal system.

Among all the effects of SCENAR therapy, the analgesic effect is the most pronounced.

The analgesic effect as a result of SCENAR exposure is manifested at the local, segmental and central levels.

1. The intensity of peripheral concavity (peripheral nociceptor hyperexcitation in the musculoskeletal structures as a result of trauma or irritation of these structures) decreases at the local level.

This happens as a result:

- Decongestion, normalization of metabolism in the area of nerve endings;
- Synthesis (local) of biologically active substances of neuropeptides with analgesic effect;
- Improved blood flow, release of pain neurotransmitters from the focus (histamine, serotonin, leukotrienes, cytokines, etc.).

2. The intensity of the central concavity (excessive activity of neurons of the posterior horns) decreases at the segmental level with an expansion of the receptive field, a decrease in excitability and hyperesthesia of subthreshold stimuli.

3. At the central level, as a result of SCENAR treatment, the activity of the visual cortex, somatosensory cortex, posterior hypothalamus and predominantly anterior (parasympathetic) hypothalamus increases. In the CNS, a "competitive" focus with ordered rhythmic variations appears, which reduces pain. At the same time, the synthesis of endorphins and enkephalins (polypeptide chemical compounds, similar in their action to opiates, which can reduce pain) is activated.

To perform SCENAR therapy you should know:

1. Where to set the device and zones to be treated (Areas on the skin that are to be treated are called ZONES of SCENAR therapy. All zones are classified as Local and General).
2. Device settings and modes of treatment.
3. Techniques for treatment.

Examination and questioning are to be performed before, during and after the treatment in order to evaluate the dynamics of the patient's condition. The duration of treatment is determined by the minimal sufficiency in area and time before the positive dynamics of the patient's complaint is achieved (such as improvement of motor performance, change of statics and dynamics of the spine).

ALGORITHM OF TREATMENT ZONES AND MODES SELECTION depends on:

1. Presence or absence of active complaint (pain).
2. State of complaint (acute or chronic).
3. Location of complaint (with or without radiating to the extremities).

ACUTE (EXACERBATION OF CHRONIC) ACTIVE COMPLAINT

Treatment is performed in SDM according to the rules of SCENAR therapy:

- The zone is treated along **General Vector** in order to get asymmetries. Find SA among the homogeneous quantitative asymmetries.
- Additional treatment is performed only on the skin in the zone in **SA projection**.
- Treat until the change is obtained: **the opposite sign**.
- While working on SA zones, **change**:
 - a) The **vector** of movement (it's necessary to find opposite sign),
 - b) **Velocity** of movement of the device on the skin (acceleration or stops),
 - c) **Device Settings** (according to the acuteness of the process).
- After obtaining SA dynamics work again on the whole zone along General Vector with the initial device settings to get **cyclicity**.

ORDER of ZONES' TREATMENT:

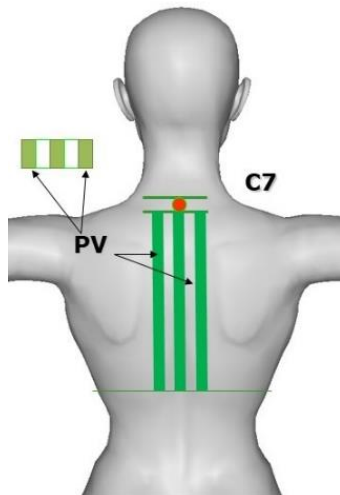
1. *Thoracic spine* (with any pain localization).
2. *Reciprocal* (opposite to the diseased) spinal zone.

3. Spinal zone in complaint (pain) projection.

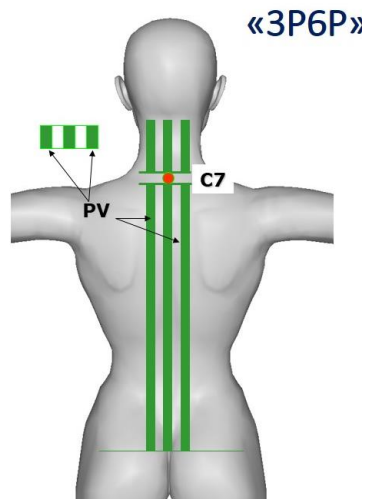
With asymmetrical localization of the complaint:

4. Paravertebral of the healthy side in complaint projection.
5. Paravertebral on the aching side.
6. Paravertebral of the reciprocal (opposite) spinal zone.

Projection of the thoracic spine and paravertebral at this level



General zones "3P6P"



Lumbar and Sacrum Area.



When the complaint (pain) is localized in the extremities:

7. Always – treat the aching extremity and opposite healthy (hand – leg, left – right), opposite vectors of treatment and device settings.
8. It is possible to treat extremities only after getting positive dynamics from the treatment of the above-mentioned zones.
9. In the projection of the clearly localized complaint (pain) or in SA or reciprocal zones the “competitive analgesia” method is used on the moving spine or extremities.

Expand within the algorithm according to the principle of minimal sufficiency before getting the positive dynamics of the complaint.

Device settings:

1) Acute injury with strong pain syndrome, limitation of functional activity of the spine

1. F-high (more than 120Hz), E-more than comfortable level
2. Am: 5:1, 3:1, 1:1. FM, Sw1, Sw3, Sw4
3. Dmpf. Sc2, Sc4, Var.

4. Int -8, Gap-80, F-60Hz, E – at the level of the pain threshold, when performing “Competitive analgesia”.
5. All parameters are combined and alternated.
6. **SCENAR FORCE-Presets.**
7. Periodicity and length of treatment – every 2 hours or upon appearance of pain again until getting stable positive dynamics of the complaint and functional dynamics of the spine.
8. Usage of the external electrodes (EPU-01, self-adhesive pads) for prolonged local treatment (20 mins).

2) Pain syndrome (exacerbation) against chronic dystrophic spinal disease

1. F – basic or low (< 60Hz),
2. Am – 3:1, 2:1, FM, SW1, SW2.
3. Dmpf. – Sc1, 3, Var.
4. Int – 3-5, Z- 20-40, F – 15-30Hz, E – at the level of the pain threshold (“Competitive analgesia” not less than 3 minutes).
5. **SCENAR FORCE –Presets.**

CHRONIC PAIN SYNDROME WITHOUT ACTIVE COMPLAINTS

The main zones for the treatment of chronic patients are GENERAL zones.

The main treatment SCENAR technique is “**3P6P**”, combination and alternation of IDM (D-1) and SDM (D-0).

The main goal of the procedure is to obtain positive adaptive result – get positive dynamics of the complaint, compare and evaluate the difference in sensations before and after the procedure. One of the features of SCENAR procedure is that the evaluation of the result from the treatment (dynamics of the complaint) is done during the procedure and helps the therapist determine the treatment zones (expanding according to the algorithm) and the parameters and modes.

The “minimal sufficiency for the area and time of treatment” is based on complaint's dynamics and allows to optimize both the quantity of zones and the time necessary to get positive results.

Example of positive results: In patients receiving SCENAR course, local deep temperature in the lumbar region normalizes, which may indicate a more pronounced regression of pathological muscle spasm and aseptic inflammation, volumetric motor activity (walking, turning and tilting of the body) and, as a result, the quality of life.

Literature:

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4. European Conference on SCENAR therapy (June 18 – 21, 2015, Vienna, Austria). Collection of articles.