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## **Report concerning the usage of the sonic wave instrument NOVAFON – SK1**

The testimonial reports received from our colleagues from the logopedic practices and the clinical institutions are all surprisingly congruent with the experience that has been gained at our school for over almost 20 years.

We also deploy the instrument mainly in voice, speech and swallowing therapy. The fact that the instrument is easy to handle and that no adverse effects have come to light to date, prompted us from very early on to rely solely upon the SK-1 in the treatment of laryngoplegia, and to dispense with treatment using electricity. In such cases, as well as in the cases outlined in other areas, the instrument is used both in the loosening and the pre-stimulation of the neck muscles, and in supporting voice resonance. We would even go so far as to claim that, when the instrument is introduced at an early stage, the much feared atrophy of the vocal muscles in cases of paralysis of the recurrent nerve can be tackled successfully. Moreover, even "residual paresis" with hyperfunctional compensation mechanisms can be treated efficiently with the aid of the instrument. The advantage over treatment using electricity lies above all in the efficient stimulation of the metabolism of the affected tissue and the regulating effect upon muscle tonicity.

By massaging the muscles of the outer neck and those surrounding the larynx with the instrument, along with its deep penetrative effect upon the inner muscles of the larynx, both correcting tension in the muscles involved as well as a stimulation of muscle function at the level of the glottis is achieved. Combined with posture, breathing and phonation exercises there is a majority, permanent success within the usual course of treatment.

To work effectively on the larynx and its surrounding structures, the patient is placed in a semi-prone position after undergoing a sequence of relaxation so that neither tension in the neck or shoulders nor an overextension of these areas ensues. Before standing up after the treatment has been completed, patients are encouraged to do exercises designed to stimulate the circulation (bending and stretching the arms, clenching and releasing fists) in order to avoid any possible negative effects associated with circulation.

Also, patients suffering from hardening of the muscles as well as from the formation of edemas and scars resulting from a dissection of the neck are treated in the

position described above. It is above all hardened lymphedemas and, to some extent, incisional scars, which are observed in the majority of such patients, that can be treated by the NOVAFON instrument very well.

The instrument is also supportive in treating facial nerve paresis in patients diagnosed with dysarthria and dysphagia. In such cases, we stimulate the entire facial muscles, starting from the forehead down and leading over the cheeks to the mouth (orbicularis oris), then proceeding over the muscles of mastication and ending at the temporomandibular joint. This process includes the healthy side of the face (in cases of unilateral paralysis) in order to achieve subsequently good results with the aid of proprioceptive neuromuscular facilitation (PNF) and the effects of radiation typical for these methods. The SK-1 with its "sonic ball" is well adapted to loosening and stimulating the base of the tongue, because the instrument's depth effectiveness can be utilised to the full. The massage is applied externally and from below via the floor of the mouth. When treating puberphonia, we place the instrument with its sonic plate upon the sternum at the level of the second costal arch. After a brief "waiting period", in which the patient is given the opportunity to become sensitive to the spread of vibrations within the entire ribcage, we then ask the patient to hum deeply in a relaxed manner, and that in the same frequency as the instrument emits. (If necessary, the therapist dictates this tone for the patient to follow). In this way, the patient can find the required chest register more easily, whereby becoming sensitive to the audio frequency also aids growing sensitivity of the body. Having the patient sit on a stool, the massage is applied to the neck and shoulder areas from behind, thus in an ideal position, in order to reduce pressure on the larynx and organs of articulation.

Of course, before commencing the massage, we clean the instrument in view of the patient using a disinfectant applied to a moist cloth. In order to glide the sonic plate across the skin more easily, we lay a silk cloth on that region of the skin. As recommended by the manufacturer, the duration of application never exceeds a maximum limit of 10-15 minutes.

It is thus quite obvious that the instrument can be utilised extensively in logopedic therapy. The advantages rapidly become evident: on the one hand, its simple, almost fool-proof use and its robustness; on the other, the few exclusion criteria such as pacemakers, infections and arteriosclerosis. For this reason, we also recommend that our patients purchase their own device for domestic use in order to increase the therapy's success.

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