

ELECTROSTIMULATION: THERAPEUTIC SUPPORT IN CONTEMPORARY AESTHETIC SPEECH THERAPY

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ABSTRACT

Electrostimulation can be considered a technological innovation of great help in improving muscle conditions in several areas or specialties such as Neurology, Orthopedics, Physiotherapy, Dermatology and also in Speech Therapy. Facial Aesthetics is one of the areas of activity of speech therapists specialized in Orofacial Motricity, an area of activity that introduced the electrostimulation technique in the therapeutic program, a contemporary proposal as a therapeutic support to accelerate and optimize results. With the aim of softening wrinkles, this technique can prevent and/or treat the stigmas of aging (Lepri, 2020)

INTRODUCTION

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Through aesthetic speech therapy, we speech therapists expand our professional area, maintaining the same field of action, that is, a therapeutic process that develops in all its fullness based on the area of Orofacial Motricity. Thus, the speech therapist is able to modify, restore and promote orofacial harmonization, as it acts directly on the functional and muscular aspects of orofacial structures, acting directly on some of the causes and consequences of facial changes resulting from the aging process (Lepri, 2020).

The electrostimulation technique in Aesthetic Speech Therapy is considered an innovation that offers the therapist new intervention possibilities to promote orofacial harmonization, restoring the characteristics of rejuvenation in a direct and effective way. Considered as a therapeutic support technique, it favors prevention and aesthetic balance whenever associated with functional balance. This technique works from the inside out in a controlled manner, generating deep muscle contractions, promoting a “lifting” effect, stimulates metabolism, increases vascularization, oxygenation and soft tissue trophism, in addition to enabling the restoration of volume and also muscle tone, and considerable improvement in the texture and vitality of the skin (Souza et.al 2007).

Electrotherapeutic currents indicated in Aesthetic Speech Therapy

FES (Functional Electrical Stimulation), a pulsed electrical current and its modulations capable of stimulating the motor nerve and obtaining functional muscle contraction as a result (Bohórquez et.al, 2013) which aims to generate a functional movement from the artificial muscle contraction whether in intraoral or extraoral modalities. The FES stimulation mode, in addition to improving the metabolic and functional condition of the muscles, also favors muscle strength and endurance, especially in the lower middle third of the face, SMAS and facial retaining ligaments. When applied for aesthetic purposes, it can combat facial flaccidity, a result of multiple factors, including muscle atrophy. The electrostimulation technique must be associated with orofacial exercises and functional reprogramming (chewing, swallowing, breathing), an important condition to optimize and maintain the results obtained (Lepri, 2020).

KOTZ, current developed in Russia in the 1970s, introduced in Canada and the United States by the Russian scientist Yadou M. Kotz. Indicated mainly for cases of flaccidity and circulatory disorders, its correct use can improve tissue and muscle condition, effect lymphatic drainage and increase cellular oxygenation (Pereira, 1999). The discomfort factor, the perception of electric current, is sometimes a limiting factor for using the technique. The Kotz current has in its characteristics a carrier of medium frequency, this condition favors the delivery of the electric charge that causes less sensorial discomfort and makes possible the applicability of the intensity parameter with high dose in an efficient way allowing vigorous muscular contractions (Ward et al, 2006). Kotz current would therefore be an effective alternative to replacing the FES mode of electrical stimulation, especially

in cases of those patients with muscle and tissue flaccidity (gravitational wrinkles) with a lowered sensory threshold.

TENS, *Trasncutaneous Electrical Nerve Stimulation*, it is a low-frequency electrostimulation modality that selectively stimulates large-diameter tactile fibers without activating smaller-diameter nociceptive fibers, promoting pain relief and thus generating functional gains (Chiarello et al., 2005). The explanation for the analgesic effect is that this current promotes the release of endorphins, which are endogenous analgesics released whenever the body feels pain. The applicability of the TENS mode in speech therapy may be related to the analgesia effect, which is why this current is used with excellent results, for example, in the control of painful symptoms in temporomandibular joint disorders (Fernandes et al., 2006). However, TENS can also be used in Aesthetic Speech Therapy in order to enhance the effect of muscle relaxation and the release of tension in soft tissues, a condition that favors the smoothing of expression wrinkles.

MESN, (*Microcurrente Electrical Neuromuscular Stimulation*), they act directly on the stimulation at

the cellular level of micro structures producing micro stimulation and neuro stimulation. It is a general bioelectric current in the range of microamperes, as it is able to allow a more efficient transport of ions, which in turn increases cellular metabolism and energy of muscle fibers (Jyothis, 2005). According to Soriano et. al 2002, some physiological effects favor an improvement in the aesthetic condition of the face such as; optimization of metabolism, increase in adenosine triphosphate and collagen production, increase in the lymphatic drainage effect of intracellular ionic exchanges and mobilization of liquids from the lymphatic and blood circulations.

■ CONCLUSION

There is no single procedure capable of reversing all the changes resulting from the facial aging process. In a therapeutic process, it is necessary to combine techniques for the different structural planes of the face. Speech therapy with a focus on facial aesthetics supported by the technique of intra and extra oral electrostimulation has been shown to be effective in redefining facial contours and smoothing expression wrinkles.

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