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The Importance of the Naso-Palatine Nerve for the Body's Homeostasis

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When thirty years ago I approached the re-education of swallowing, perhaps only the name of the nasopalatine nerve was known and that it was the oral terminal branch of the second branch of the trigeminal nerve. It was so little considered that many implantologists, having to insert implants in the premaxilla, eliminated it with impunity without knowing if this would cause harm to the patient.

The interest in this nerve arose when, starting from the second-third month of swallowing re-education, apparently inexplicable improvements began to be appreciated, even before the results on lingual movement and muscle tone. Patients often asked me whether it was due to re-education that vision improved unexpectedly or that a scoliotic spine was so improved that it no longer required the expected treatment with a brace. I had no answers, but the frequency of the improvements found led me to focus my attention on the point that proved to be the means of improvement. It was the nasal-palatine foramen, the emergence of the nerve in the palate and already considered to be the "lingual spot", the point where the lingual apex must rest to initiate physiological swallowing. I bought anatomy books, magazines in the hope of having an "explanation", but without finding answers. In 2000 I happened to read in an Anatomy and Embryology magazine, the article written by two professors of Comparative Anatomy, who had found in all higher animals, the presence, at the emergence of the nasopalatine nerve, of an enormous quantity of the 5 major exteroreceptors present in the human body.[1] It was the answer I was looking for, the neurological explanation of the improvements seen and not explained. In the meantime, a book of mine, written to warn dentists against carrying out treatments without considering oral muscle function due to the risk of creating problems outside the dental field, had become a textbook in the Masters in Posturology of various Italian universities and I was invited to participate as a teacher. This allowed me to begin a journey of research that perplexed or shocked those who read it. The function of the nasopalatine nerve has come to the fore forcefully both in the postural field and in general medicine. Help in accessing the neurological field came from the presentation at a conference of the case of a volleyball player who, after receiving a ball in the face, found herself with an apparently paralyzed leg, after a hospital stay, in which she had been hypothesized tibial hyperostosis, a neuropathy, a tumor in the spinal cord, a psychosis, he had finally seen the possibility of walking without crutches by sucking the finger (we have shown that you suck to activate the receptors) ( ) or by positioning the tongue on the palatine receptors.

This case captured the attention of Prof. Marcello Brunelli, who,when he worked at the Columbia University

laboratory directed by Eric Kandel, had discovered the basis of long-term memory; later director of the Institute of Physiology of the CNR and of the Department of Physiology and Biochemistry of the University of Pisa. He was so interested in the case that he soon became our contact on the relationship between the mouth and the brain. The study of neurotransmitters has given rise to research that ranges across the various fields of medicine.

Among the first, one, taken up by the Santa Caterina University in Brazil,[2] investigated the improvements in parkinsonian patients obtained with stimulation of the nasopalatine spot carried out three times a day for three minutes for three months. The results stunned specialists and a poster, presented at the 2007 National Parkinson's Congress indicated Myofunctional Therapy as a new means of treating Parkinson's.

Studies have addressed the effects on serotonin secretion. The interest arose from the improvement of patients with juvenile idiopathic scoliosis by re-educating swallowing for orthodontic problems. Since the effects of serotonin and melatonin deficiency in scoliotic children have been known since the 1990s,[3] we assumed that the improvements obtained with re-education were due to an increase in their secretion. We have conducted research ( ) which clarified how palatal stimulation is even capable of tripling serotonin production in just a few months.

Since serotonin is implicated in the control of muscle tone (a research has just been submitted for publication), we hypothesized an interpretation that goes against any previous interpretation for sleep apnea (OSAS). These were explained by a muscular hypotonus with fall of the soft palate towards the pharynx. We have demonstrated, by measuring the diameter of the pharynx in profile radiographs taken with the tongue in the usual position, away from the palate, and with the tongue in contact with the palatine receptors, that it is instead a case of hypertonicity of the pharyngeal constrictor muscles which restrict the pharynx and together with the hypertonicity of the M. Hyoglossus make the passage of air difficult.[4]

A particular finding was seen in women with difficulty starting a pregnancy, visited for problems with TMJ or for orthodontic requests. I leave aside the relationships between impaired swallowing and orthodontic problems because they can be found in my other articles or books, but I focus on this effect of muscular dysfunction because infertility could hardly be associated with incorrect swallowing. When we realized that the oral problem caused a decrease in Melatonin[5] and that, in its absence, prolactin increases, which inhibits the bursting of the follicles, we spoke to the gynecologists, but they ignored us. We then wrote to Prof Eric Kandel, Nobel Prize winner for Neuroscience in 2000. He immediately replied: “Rejoice! In a world of the blind, he who has only one eye is a king!”

The normalization of the electroencephalographic waves was appreciated by correctly positioning the tongue. Enormous changes in functional resonances were also appreciated by placing the tongue on the spot with an increase in active areas. The resonances explained to us the improvements obtained in particular and inexplicable problems. An example: 42 month old child, doesn't speak, doesn't walk, drools. Diagnosis carried out in highly specialized centers: atrophy of the corpus callosum. The mother wants me to see it, but I tell her that it's not my responsibility. She insists and finally takes him for a visit. I explain to her that I am not a neurologist and that the specialists didn't know what to do, but I feel sorry for her so I tell her that, if the child can move his tongue voluntarily, he will be able to undergo re-education at the age of 6 and stop drooling. An idea comes to me. Does the child like Nutella? (a spreadable hazelnut cream). I ask the mother to apply it to the spot several times a day, especially if when she applies it she finds the palate very clean, a sign that the baby can lick the cream. After a week I get the first email. The child walks holding hands and says simple words. He continues the application and after a month he climbs into bed and asks his mother questions to the disbelief of those who treat him at the Institute.

We are currently studying the effects on the thyroid and the improvements in athletes. There is so much to discover and explain, but there is no doubt that before the appearance of drugs the body was able to rebalance itself naturally.

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