

# Cervical stimulation therapy after treatment laryngeal cancer reduce lymphedema

Henrique Jose Pereira de Godoy<sup>\*</sup>, Rodrigo Ocampos Troitino<sup>2</sup>, Livia Maria Pereira de Godoy MD<sup>3</sup>, Thatiany Gracino de Marqui<sup>1</sup>

Pereira de Godoy HJ, Troitino RO, Pereira de Godoy LM, et al. Cervical stimulation therapy after treatment laryngeal cancer reduces lymphedema. *J Phlebol Lymphol* 2017;10(1):10-11.

**ABSTRACT:**

**AIM:** The aim of this study is to describe the use of Godoy & Godoy Cervical Stimulation Therapy to improve the clinical signs and symptoms of lymphedema after laryngeal cancer treatment. Case report: The case of a 62-year-old patient is reported who made an ultrasound and found a nodule in the larynx and diagnosed laryngeal cancer. The patient was submitted to

chemotherapy and radiotherapy. After treatment, the patient complained of neck pain, difficulty in swallowing, decreased saliva production, difficulty in sleeping and hoarseness. The patient was then referred to the Clinica Godoy for treatment of the edema where Cervical Stimulation Therapy as described by Godoy & Godoy was performed. A marked improvement was observed in the first few days with the voice and swallowing of solids returning to normal.

**CONCLUSION:** The Cervical Stimulation Therapy improvement of signs and symptoms of lymphedema resulting from laryngeal cancer treatment.

**Key Words:** Cancer, laryngeal, lymphedema, stimulation, lymph drainage.

The Brazilian National Cancer Institute (INCA) estimated that there were 7350 new cases of laryngeal cancer in Brazil in 2016, with an estimated risk of 6.43 cases in every 100,000 men. This type of cancer occurs mostly in over 40-year-old men; the prevalence in women is so low that a statistical estimate is not recommended. In the world, laryngeal cancer is the second most common cause of neoplasia of the respiratory system and the most common type of head and neck cancer. The most recent global estimate is about 129 thousand new cases per year, with a death rate of 70 thousand people annually. Smoking and alcohol are the main risk factors followed by family history, poor diet, unfavorable economic conditions and exposure to Human papillomavirus (HPV) and chemical products among others. The most common symptoms are: persistent infections and hoarseness, dysphagia, pain, dyspnea, halitosis, weight loss and, more rarely, ear ache. When diagnosed in the early stages the prognosis for cure is 80 to 100% (1).

Treatment involves chemotherapy and radiotherapy, with one complication of treatment being the onset of lymphedema. Lymphedema is characterized by an abnormal accumulation of protein-rich fluid and macromolecules in the tissue due to dysfunction of the lymphatic system. Thus an imbalance between the formation of lymph and its absorption occurs (2,3).

In recent years, a new technique of manual lymphatic drainage called Cervical Stimulation Therapy was developed mainly to treat lymphedema of the head and neck.

The aim of this study is to report the use of Godoy & Godoy Cervical Stimulation Therapy for the clinical improvement of signs and symptoms of lymphedema resulting from laryngeal cancer treatment.

**CASE REPORT**

A 62-year-old female patient reported that two years previously she had felt a strong sore throat after eating ice cream. Soon after, an outbreak of herpes zoster appeared which was treated with medications, but the pain continued and the patient was referred to an otolaryngologist who made an ultrasound and found a nodule in the larynx. The patient was referred to an oncologist who diagnosed laryngeal cancer. Initially she was submitted to nine sessions of chemotherapy and forty sessions of radiotherapy and then another two more chemotherapy sessions were performed. The patient reported that after the treatment she found it difficult to swallow, her production of saliva decreased and she suffered from hoarseness, swelling and difficulty to move the neck and to sleep. Faced with this clinical picture, the patient received some guidance from her doctor, but there was no improvement of the difficulties caused by the radiation therapy.

After consulting with an expert in the treatment of lymphedema, Godoy & Godoy Cervical Stimulation Therapy was started. This technique consists of light stimulation of the cervical region for a period of 20 minutes five times per week. In the first week of treatment the patient reported an improvement in the neck mobility, saliva production, hoarseness and swallowing and she started eating solids again. There was also a reduction in the edema. With the evolution of treatment, the saliva production and reduction of edema continued to improve and the patient was able to have an almost normal life.

**DISCUSSION**

This study describes a new therapeutic option to complications of neck radiotherapy for cancers that can lead to edema, fibrosis, and difficulty in swallowing, reduced saliva production, hoarseness, cough and discomfort in the cervical region. These complaints rapidly improved using Cervical Stimulation Therapy in the patient reported herein. There are few published reports employing this technique (4-6), which has been used in isolation in the treatment of lymphedema of the head and neck and in children.

The goal of therapy is to reduce edema by mobilizing macromolecules and fluid in a certain region. The improvement of the patient's symptoms in this case is clinically associated to the reduction of edema. In about five days there was improvement of swallowing and hoarseness. The improvement of cervical mobility, the production of saliva and coughing continuously improved with treatment. It is interesting to note the short period of treatment necessary for the symptoms to improve.

The medical team has more than 10 years of experience using this technique. The first patient treated with the method was using a nasogastric tube at the start of treatment due to difficulty in swallowing. After three months, it was possible to fit a dental prosthesis and the patient returned to eat almost normally (6).

The number of patients undergoing radiotherapy is high and improvements of the symptoms can be seen with a simple treatment, which changes the clinical evolution of the symptoms. The improvement of edema occurs within a few days thereby facilitating further clinical examinations. The hypothesis of the mechanism of action of this technique is that it stimulates the parasympathetic system or the contraction of lymphangions.

**CONFLICT OF INTEREST**

All authors confirm no have conflict interest.

<sup>1</sup>Medicine Student at the Universidade Federal do Mato Grosso Cuiabá, MT and Researcher Group of the Clínica Godoy, São José do Rio Preto, SP, Brazil; <sup>2</sup>Medicine Student at the Medicine School of ABC-Santo Andre-São Paulo and Researcher Group of the Clínica Godoy, São José do Rio Preto, SP, Brazil; <sup>3</sup>Resident the Clinic General in Medicine School of Marília-São Paulo-Brazil(FANEMA) and Researcher Group of the Clínica Godoy, São José do Rio Preto, SP, Brazil

Correspondence: Henrique Jose Pereira de Godoy, Avenida Constituição, 1306, Sao Jose do Rio Preto, CEP: 15025-120, SP, Brazil, Tel: +55 1732326362, E-mail: henriquegodoy95@gmail.com

Received: September 07, 2017, Accepted: September 21, 2017, Published: September 22, 2017



This open-access article is distributed under the terms of the Creative Commons Attribution Non-Commercial License (CC BY-NC) (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits reuse, distribution and reproduction of the article, provided that the original work is properly cited and the reuse is restricted to noncommercial purposes. For commercial reuse, contact [reprints@pulsus.com](mailto:reprints@pulsus.com)

**FUNDING**

The study no has financial support.

**ETHICAL APPROVAL**

The study was approved Ethical Committee Medicine School of Sao Jose do Rio Preto-FAMERP-Brazil # 046021/2012.

**CONSENT**

The study has consent signed by participant.

**REFERENCES**

1. INCA (Instituto Nacional do Câncer). Estimativas novos caso de câncer de pescoço no Brasil; Ministério da Saúde 2016.
2. de Godoy JM, de Godoy Mde F. Godoy and Godoy. Technique in the treatment of lymphedema for under privileged population. *Int J Med Sci.* 2010;7(2):68-71.
3. Ji RC. Lymphatic endothelial cells, lymphedematous lymphangiogenesis, and molecular control of edema. *Lymphat Res. Biol.* 2008;6(3-4):123-37.
4. Godoy JM, Godoy MdF, Meza MC. Godoy, et al. Technique of cervical stimulation in the reduction of edema of the face after cancer treatment. *QJM.* 2008;101(4):325-7.
5. Pereira de Godoy JM, Silva SH, Toninato MC, et al. Cervical stimulation for volumetric reduction of limbs in the treatment of lymphedema. *Indian J Med Sci.* 2008;62(10):423-5.
6. Godoy JMP, Godoy MFG, Braile DM. Drenagem Linfática e Qualidade de Vida em Paciente com Laringectomia. *Ver Port ORL.* 2000;38:47-9.