

# **Acupuncture Technique For Pilocarpine-Resistant Xerostomia Following Radiotherapy For Head and Neck Malignancies**

Richard C. Niemtow, MD, PhD, MPH\*

Bryon C. May, MD\*

Y. Peter Peng, MD\*

Warren S. Inouye, MD\*

Peter A.S. Johnstone, MD, MA\*

\*Radiation Oncology Division, Naval Medical Center, 34800 Bob Wilson Drive, Suite 14, San Diego, CA 92134-1014

## **ABSTRACT**

Twelve head and neck cancer patients developed xerostomia secondary to radiotherapy. In most cases, this was refractory to conventional pilocarpine therapy. Acupuncture was offered as a potential palliation of their symptoms. Acupuncture stimulated saliva secretion to varying degrees.

## **KEY WORDS**

Head, Neck, Cancer, Malignancy, Tumors, Xerostomia, Radiotherapy, Acupuncture, Saliva, Electro-Auriculotherapy.

## **PATIENTS AND METHODS**

Twelve patients with refractory xerostomia after radiotherapy were treated with acupuncture and are the subject of this report.

There is no standard acupuncture protocol for post radiotherapy xerostomia, only suggested points (1, 2). The acupuncture treatment employed is performed in 2 phases. Phase 2 is used if Phase 1 is inadequate.

Phase 1: sterile needle (3) inserted bilaterally into LI 2 or 3 (6); auriculotherapy points: Point Zero, Shen Men, and Salivary Gland (C) II are needled bilaterally. Wait 20 minutes.

If no saliva secretion is apparent, Phase 2 is initiated: the needles at Salivary Glands (C) II are removed. Electro-stimulation of Salivary Gland(C) II points at 40 microamps @ 10 Hz with an electroauriculotherapy stimulator (4) for 30 seconds bilaterally is performed. Also, stimulation of Salivary Gland (F) I at 40 microamps @ 10 Hz points for 30 seconds bilaterally is accomplished. Re-needle Salivary Glands (C) II. Stimulate LI 4 bilaterally for 10 seconds using a piezo-electric stimulator (5).

## **RESULTS**

There were no adverse effects referable to acupuncture. An increased degree of salivation was subjectively present in all cases after acupuncture. Follow-up evaluations revealed that the oral buccal mucosa was moist and saliva present. All patients were capable of expectoration. We recommend that patients be treated with twice-weekly sessions for 1-2 weeks, then every 3- 4 weeks, depending upon the severity of their cases.

## **DISCUSSION**

Curative doses of radiation to the head and neck area for malignancies are fraught with secondary xerostomia. Acupuncture is a stimulation to these patients to produce saliva. In some patients resistant to pilocarpine therapy, it appears that acupuncture must activate the salivary glands through another mechanism.

## **CONCLUSION**

Acupuncture using the above protocol may contribute to less xerostomia for patients with refractory symptoms after radiotherapy. This technique is without side effects and is considerably less expensive than pharmacological alternatives. Longer follow-up, optimization of technique, and further prospective objective measurement of saliva response continue in our clinic. Further research is imperative to optimize acupuncture techniques for head and neck cancer patients.

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Correspondence and reprint requests to: Dr Richard C. Niemtow, Radiation Oncology Division, Naval Medical Center, 34800 Bob Wilson Dr., Suite 14, San Diego, CA 92134-1014. Phone: 619-532-7274; Fax: 619-532-8178; E-mail: [N5EV@msn.COM](mailto:N5EV@msn.COM)

