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## **Acupuncture for the prevention of radiation-induced xerostomia in patients with head and neck cancer.**

Braga FP, Lemos Junior CA, Alves FA, Migliari DA.

### **Author information**

### **Abstract**

The aim of this study was to evaluate the effectiveness of acupuncture in minimizing the severity of radiation-induced xerostomia in patients with head and neck cancer. A total of 24 consecutive patients receiving > 5000 cGy radiotherapy (RT) involving the major salivary glands bilaterally were assigned to either the preventive acupuncture group (PA, n = 12), treated with acupuncture before and during RT, or the control group (CT, n = 12), treated with RT and not receiving acupuncture. After RT completion, clinical response was assessed in all patients by sialometry, measuring the resting (RSFR) and stimulated (SSFR) salivary flow rates, and by the visual analogue scale (VAS) regarding dry mouth-related symptoms. Statistical analyses were performed with repeated-measures using a mixed-effect modeling procedure and analysis of variance. An alpha level of 0.05 was accepted for statistical significance. Although all patients exhibited some degree of impairment in salivary gland functioning after RT, significant differences were found between the groups. Patients in the PA group showed improved salivary flow rates (RSFR, SSFR;  $p < 0.001$ ) and decreased xerostomia-related symptoms (VAS,  $p < 0.05$ ) compared with patients in the CT group. Although PA treatment did not prevent the oral sequelae of RT completely, it significantly minimized the severity of radiation-induced xerostomia. The results suggest that acupuncture focused in a preventive approach can be a useful therapy in the management of patients with head and neck cancer undergoing RT.

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