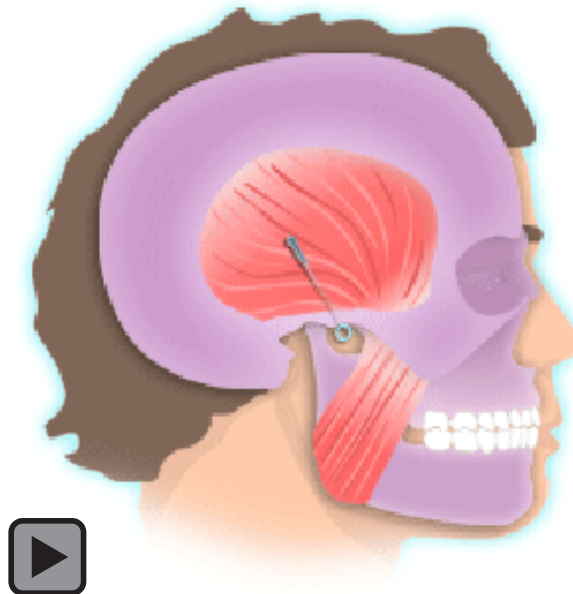


Treatment of Xerostomia in Prosthetic Patients Using Local Acupuncture Points on the Face

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Abstract

Acupuncture is gaining popularity in mainstream dentistry to treat various conditions. This paper aims to present acupuncture techniques to treat prosthetic patients with xerostomia using local acupuncture points on the face.

Keywords: Acupuncture, xerostomia, prosthetics, dental care

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Introduction

Xerostomia is a clinical condition characterized by a decrease in the production of saliva. It may present itself as a local symptom; as part of a systemic disease such as Sjogren's syndrome, diabetics, alcoholism; as side effects of medications; or following therapeutic radiation to the head and neck regions.¹ Xerostomia can lead to difficulties in patients receiving prosthetic treatments. The comfort and retention of removable dentures depends largely on the lubricating ability of saliva; dry mucosa can compromise the retention of prosthesis. Furthermore, saliva flow facilitates mastication, formation of food bolus and swallowing, and plays an important role in articulation and speech.²

Blom et al.³ demonstrated a significant increase in salivary flow during and after acupuncture treatment in patients with severe xerostomia. In a long-term follow-up of patients treated with acupuncture for xerostomia, Blom and Lundeborg⁴ showed acupuncture could significantly result in improvement in salivary flow rate for up to 6 months. They also showed additional acupuncture therapy could maintain such improvement in salivary flow rate for up to 3 years.⁴ Furthermore, Johnstone et al.⁵ demonstrated acupuncture could provide palliation in patients with pilocarpine-resistant xerostomia following head and neck radiotherapy. Dawidson et al.⁶ found the release of several neuropeptides in the saliva of healthy subjects could be increased by acupuncture. The same researchers also demonstrated the increased release of calcitonin gene-related peptide (CGRP) could be one of the factors that increases the salivary flow rate in xerostomic patients treated with acupuncture⁷, but the mechanisms of action remain essentially unknown.

Technique

Various acupuncture points can be used to treat xerostomia, such as auricular points, digital points⁵, or local points on the face. In the experience of the authors, local points on the face provide a more familiar environment for dentists and are more welcomed by patients. The local acupuncture points used on the face are Daying (ST-5), Jiache (ST-6), Xiaguan (ST-7), Tinggong (SI-19), and Chengjiang (REN-24). ST-5 (Figure 1) is located directly anterior to the angle of the mandible, in a depression at the anterior bor-

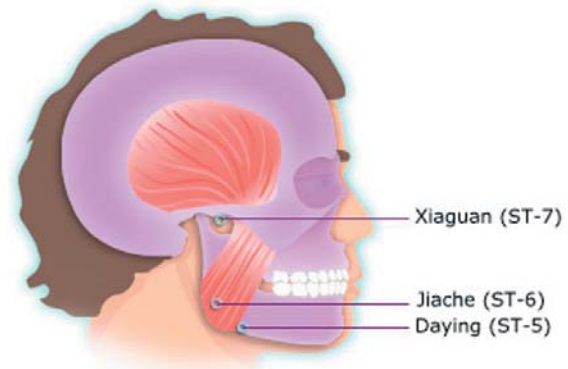


Figure 1. Locations of Daying (ST-5), Jiache (ST-6), (ST-7) points.

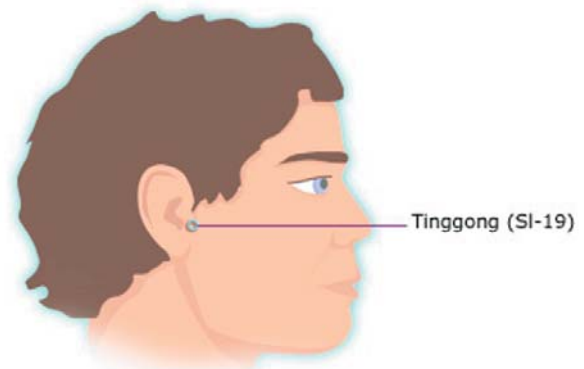


Figure 2. Location of Tinggong (SI-19) point.

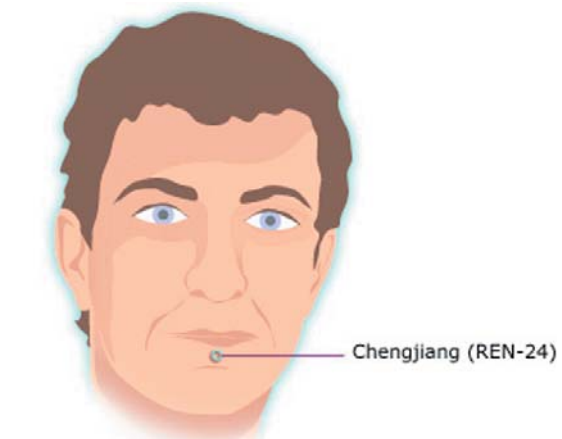


Figure 3. Location of Chengjiang (REN-24) point.

der of the masseter muscle. ST-6 (Figure 1) is located approximately one fingerbreadth anterior and superior to the angle of the mandible at the prominence of the masseter muscle. Location of the ST-5 and ST-6 points is made easier with the patient clenching the jaws. ST-7 (Figure 1) is situated at the lower border of the zygomatic arch in the depression anterior to the condylar process of the mandible.

SI-19 (Figure 2) is located in the depression between the middle of the tragus and condylar process of the mandible.

REN-24 (Figure 3) is situated in the horizontal mentolabial groove, approximately midway between the chin and the lower lip.

Once located, acupuncture needles are inserted according to the following techniques:⁸

- ST-5: Oblique insertion 0.3 – 0.5 inch in depth
- ST-6: Perpendicular insertion 0.3 – 0.5 inch in depth
- ST-7: Perpendicular insertion 1.5 inches in depth
- SI-19: Perpendicular insertion 0.5 – 1.0 inch
- REN-24: Perpendicular insertion 0.2 – 0.5 inch

All needles should be left *in situ* for 15 minutes before removal. Additional stimulation may be applied by manual rotation to the needles. The acupuncture treatment should be carried out weekly for 3 to 5 weeks followed by regular monthly treatment.



Conclusion

Some dental care providers may be reluctant to refer patients for acupuncture treatment due to a lack of familiarity with this type of therapy and the limited amount of clinical research information. With more patients willing to try alternative treatment and with increasing published data available for clinicians, the ancient Chinese acupuncture has been given a new lease on life with the interpretation of western science. Not only has it been shown that acupuncture provides more than just placebo effects, it has been demonstrated in various controlled trials to have a role in mainstream dentistry, especially in the management of gagging reflex, temporomandibular dysfunction, and xerostomia. More standardized clinical trials are needed to demonstrate the effect of acupuncture. Serious adverse effects following acupuncture is rare. However, it is the responsibility of the clinicians wishing to practice acupuncture to have a good understanding of the acupuncture philosophy and proper training in the field and, therefore, be able to prevent, recognize, and manage adverse effects when they occur.

References

1. Scully C, Cawson RA. Medical Problems in Dentistry. 4th ed. Kent: Wright; 1999:178-179.
2. Zarb GA, Bolender CL, Carlsson GE. Boucher's prosthodontic treatment for edentulous patients. 11th ed. St. Louis: CV Mosby; 1997:109-124.
3. Blom M, Dawidson I, Angmar-Mansson B. The effect of acupuncture on salivary flow rates in patients with xerostomia. Oral Surg Oral Med Oral Pathol. 1992 Mar;73(3):293-8.
4. Blom M, Lundeberg T. Long-term follow-up of patients treated with acupuncture for xerostomia and the influence of additional treatment. Oral Dis. 2000 Jan;6(1):15-24.
5. Johnstone PA, Peng YP, May BC, et. al. Acupuncture for pilocarpine-resistant xerostomia following radiotherapy for head and neck malignancies. Int J Radiat Oncol Biol Phys. 2001 Jun 1;50(2):353-7.
6. Dawidson I, Angmar-Mansson B, Blom M, et. al. The influence of sensory stimulation (acupuncture) on the release of neuropeptides in the saliva of healthy subjects. Life Sci. 1998;63(8):659-74.
7. Dawidson I, Angmar-Mansson B, Blom M, et. al. Sensory stimulation (acupuncture) increases the release of calcitonin gene-related peptide in the saliva of xerostomia sufferers. Neuropeptides. 1999 Jun;33(3):244-50.
8. Chen E. Cross-sectional anatomy of acupoints. 1st ed. Hong Kong: Churchill Livingstone; 1995: 113-130.

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