

Introduction

- Temporalis tendon transfer (TTT) is a minimally invasive technique for dynamic reanimation of the paralyzed face.¹
- TTT achieves both aesthetic and functional improvements
- Patients have a quick postoperative recovery and minimal morbidity¹
- Surgical site infection remains a concern, particularly in irradiated and immunocompromised patients; however, few complications have been reported.
- Proposed interventions to reduce infection rate include: meticulous incision site closure, prophylactic oral antibiotics, and topical oral antiseptics^{2,3}
- **Objective:** to characterize incidence of postoperative infection and to elucidate interventions which may prevent infection after temporalis tendon transfer via the intraoral approach

Methods

- Retrospective chart review for patients who underwent temporalis tendon and temporalis muscle transfer at a single academic institution from 2014 to 2020
- Two cohorts based upon operative approach: Intraoral vs. extraoral
- Medical records were reviewed for medical comorbidities, history of radiation, use of fascia lata graft, perioperative chlorhexidine use, infection, and treatment

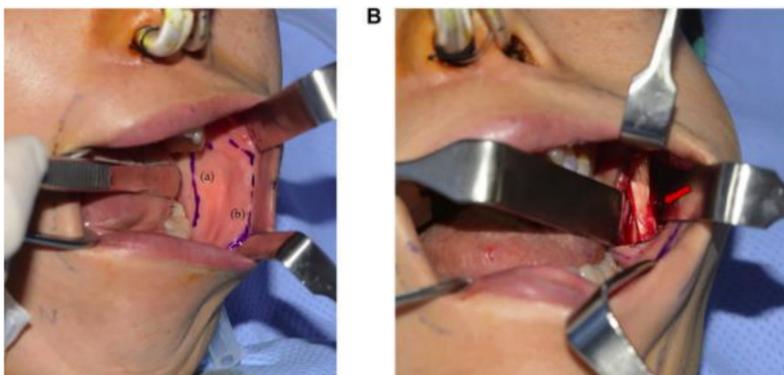


Figure 1: Intraoral approach to temporalis tendon transfer²

Results

- 31 patients were included in analysis
 - 19 (61%) via extraoral approach
 - 12 (39%) via intraoral
- There were no significant differences in patient demographics
- Incidence of infection:
 - Two patients (17%) from the intraoral group requiring incision and drainage or removal of the fascia lata graft
 - Three patients (16%) from the extraoral group developed infection in the nasolabial incision requiring incision and drainage (n=2) or oral antibiotics only (n=1)
- Infection rates were not significantly affected by use of a fascia lata graft
- For perioperative antibiotic assessment, 20 patients were included in this subgroup analysis (*11 patients were excluded due to incomplete medical records including 3 patients from extraoral group that developed infection)
- Antibiotic use by cohort depicted in Figure 2.

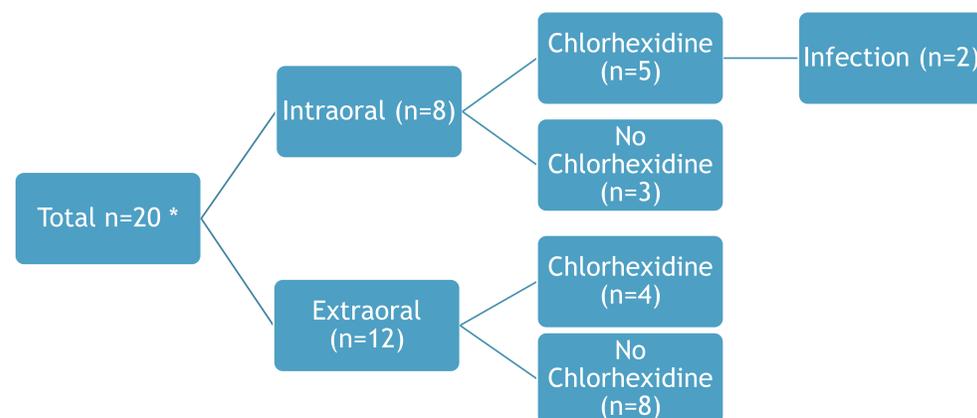


Figure 2: Breakdown of antibiotic use by cohort (n=20)

Discussion

- In this small series, surgical approach or use of fascia lata graft did not correlate with postoperative infection rate, although an increased severity of infection was noted when fascia lata graft was utilized.
- Records were incomplete to assess the impact of chlorhexidine use on infection rates.
- We hypothesize that risk of surgical site infection is higher due to potential wound contamination from oral flora.
- The perioperative use of antiseptic mouthwash is a reasonable method to alleviate some of the oral flora burden prior to surgery.

Conclusion

- Temporalis tendon transfer is a safe and effective method of providing dynamic reanimation of the paralyzed face.
- Further research include a multi-institutional retrospective study with larger sample size and more generalizability to conduct multi-variate analysis for independent risk factors.
- Prospective work is necessary to elucidate risk factors and prevention strategies for oral and perioral surgery.

References

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2. Park DJ, Chung J-H, Baek S-O, et al. Intraoral temporalis transposition for facial reanimation: A novel technique in facial nerve palsy. *Journal of Cranio-Maxillofacial Surgery*. 2020;48(3):235-241.
3. Dionigi, G., Bacuzzi, A., Lavazza, M. *et al.* Transoral endoscopic thyroidectomy: preliminary experience in Italy. *Updates Surg* **69**, 225–234 (2017). <https://doi.org/10.1007/s13304-017-0436-x>