

Injury to the inferior alveolar and lingual nerve branches of the trigeminal nerve are known complications of dental and oral and maxillofacial surgical procedures. There is significant discussion regarding appropriate timing for initiation of surgical repairs. The literature consists of mostly case reports and case series with recommended guidelines for timing of surgical repair; however, there is limited scientific evidence to support these recommendations. Several authors of clinical series state that although many of their surgical procedures were performed later than the time generally recommended due to the timing of referral or other issues such as insurance authorization, reasonable clinical results were observed in their patients. Various descriptions of techniques of nerve injury assessment and testing methods further complicate the issue as to specific timing recommendations. The consensus of literature reviewed for discussion indicates that more research is necessary in this area to better answer the question of timing for repair of trigeminal nerve injuries.

References

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- Pogrel MA: The results of microneurosurgery of the inferior alveolar and lingual nerve. *J Oral Maxillofac Surg* 60:485, 2002
- Rutner TW, Ziccardi VB, Janal MN: Long-term outcome assessment for lingual nerve microsurgery. *J Oral Maxillofac Surg* 63:1145, 2005

Late Surgical Management of Lingual Nerve Injuries: Outcome Assessment

Keith Smith, PhD, FDSRCS, Sheffield, UK

Injury to the lingual nerve during the removal of mandibular third molar teeth is a significant clinical complication, with a reported incidence of approximately 7% of operations. Most of the sensory disturbances do re-

solve over the course of a few weeks or months, but a small group of about 0.5% do not recover fully. In this group of patients the symptoms vary widely from a minor degree of hypoesthesia to severe dysesthesia, and many complain of problems with speech, mastication and taste. For these patients microsurgical exploration and repair of the damaged lingual nerve have been shown to be effective methods of treatment.

Although lingual nerve repair is now an accepted surgical technique, patient selection and the timing and subsequent effectiveness of the surgery continues to be controversial. In a few patients, damage to the lingual nerve may be noted or suspected at the time of third molar removal, and either an immediate or early repair is indicated. However, in most patients the nerve injury only becomes apparent at review, and at that stage it is difficult to distinguish between patients with a transient or permanent sensory disturbance. This may delay for several months the decision whether or not to surgically explore the nerve. Our laboratory studies have shown that a three month delay prior to repair has little effect on the outcome. However, some clinical reports have indicated that the greatest recovery is with repairs carried out within the first three months after injury, and that after 12 months the distal nerve is frequently replaced by scar tissue incapable of being repaired. In contrast our clinical studies failed to show any correlation between the delay prior to repair and any measure of sensory recovery. Furthermore, we and others have shown worthwhile recovery even after a delay of several years prior to repair.

References

- Smith KG, Robinson PP: *Brain Research*. 691:142, 1995
- Robinson PP, Loescher AR, Smith KG: *Br J Oral Maxillofac Surg* 38:255, 2000
- Hillerup S, Hjørting-Hansen E, Reumert T: *J Oral Maxillofac Surg* 52:1028, 1994

SYMPOSIUM ON ALVEOLAR GRAFTING/RIDGE PRESERVATION

Friday, October 6, 2006, 7:30 am—9:30 am

Moderator: Louis K. Rafetto, DMD, Wilmington, DE

Third Molar Socket Grafting: Is There an Indication?

Thomas B. Dodson, DMD, MPH, Boston, MA

The purpose of this presentation is to address the following clinical question: "Among subjects undergoing mandibular third molar (M3) removal, does an intervention at the time of tooth removal, when compared to no intervention, improve the long-term periodontal health on the distal aspect of the adjacent second molar (M2)?"

A review of the literature identified seven randomized clinical trials (RCTs) or prospective cohort studies addressing the clinical question. The interventions were classified as periodontal, anatomic, or reconstructive. Periodontal interventions included mechanical debridement. Anatomic interventions consisted of using different types of mucoperiosteal flaps to improve wound healing. Dentoalveolar reconstructive procedures (DRPs) included guided tissue regeneration (GTR) or grafting with bone substitutes or platelet-rich plasma (PRP). In brief, routine application of interventions to