

ORAL SURGERY CARE



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Dear Colleagues and Friends,

Uncertainty and chaos do not fit well with our collective psyche, and we have had way too much of both in recent months. I invite you to enter a COVID- and civil unrest-free zone to review some recent oral surgery and implant dentistry literature.

We remain available and committed to providing top quality oral surgery treatment for your patients. In today's environment they need assurance that their safety will not be compromised by a visit to a health care provider. We are sensitive to this need, and have instituted a multi-layered approach to put patients at ease. Initial telephone and subsequent conversations, website descriptions, and especially online photographs of our physical changes, give comfort by showing we have gone well beyond the minimum recommendations to keep them safe. We want your patients and our own staff to remain confident we are taking all possible steps to keep everyone healthy.



Oral Surgery Care

Best Regards,

Brent Florine, DDS

Is Ultrasonic Bone Scalpel Useful in Le Fort I Osteotomy?

Demirbas AE, Bilge S, et al.
J Oral Maxillofac Surg. 2019 Sep 27

Safety and precision are two main goals in research to improve bone cutting in maxillofacial surgery. The purpose of this prospective clinical study was to analyze the outcomes using an ultrasonic bone scalpel versus a piezoelectric surgical device and the conventional technique in a Le Fort I osteotomy. The predictor variables were the devices used to perform the Le Fort I osteotomy, divided into 3 groups: 1) ultrasonic bone scalpel (BoneScalpel; Misonix, Farmingdale, NY), 2) piezoelectric surgical device, and 3) conventional technique (Lindeman burr and reciprocal saw). The primary outcome of the study was cutting time, whereas secondary outcomes were length

of the procedure, total blood loss, intraoperative complications, and postoperative edema. Other variables of interest were age and gender. Data were analyzed using appropriate statistical analysis.

The study sample was composed of 34 patients with a mean age of 21.5 years, and 63.3% of patients were women. The mean cutting time and length of the procedure were significantly shorter with the bone scalpel than with the other types of surgery. The ultrasonic bone scalpel showed a significant reduction in intraoperative blood loss of up to 45% compared with the piezoelectric surgical device and the conventional technique. *The results of this study suggest that the ultrasonic bone scalpel is an effective ultrasonic bone-cutting instrument in a Le Fort I osteotomy as evidenced by the significant decrease in the cutting time, intraoperative blood loss, and postoperative edema compared with the other techniques.*

Risk of Lingual Nerve Injuries in Removal of Mandibular Third Molars

Tojyo I, Nakanishi T, et al.
Maxillofac Plast Reconstr Surg. 2019 Sep 10;41(1):40

Through the analysis of clinical data, the authors attempted to investigate the etiology and determine the risk of severe iatrogenic lingual nerve injuries in the removal of the mandibular third molar. A retrospective chart review was

continued on back page

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Risk of Lingual Nerve Injuries...continued

performed for patients who had undergone microsurgical repair of lingual nerve injuries. The following data were collected and analyzed: patient sex, age, nerve injury side, type of impaction. Ratios for the respective lingual nerve injury group data were compared with the ratios of the respective data for the control group, which consisted of data collected from the literature. The data for the control group included previous patients that encountered various complications during the removal of the mandibular third molar.

The lingual nerve injury group consisted of 24 males and 58 females. The rate of female patients with iatrogenic lingual nerve injuries was significantly higher than the control groups. Ages ranged from 15 to 67 years, with a mean age of 36.5 years old. Lingual nerve injury was significantly higher in the patient versus the control groups in age. The lingual nerve injury was on the right side in 46 and on the left side in 36 patients. There was no significant difference for the injury side. The distoangular and horizontal ratios were the highest in our lingual nerve injury group. *The authors concluded that the distoangular impaction rate in our lingual nerve injury group was significantly higher than the rate for the control groups. Distoangular impaction of the mandibular third molar in female patients in their 30s, 40s, and 50s may be a higher risk factor of severe lingual nerve injury in the removal of mandibular third molars.*

Clinical Outcomes Following Immediate Loading of Single-Tooth Implants in the Esthetic Zone

Cheng Q, Su YY, et al.
Int J Oral Maxillofac Implants. 2020 Jan/Feb;35(1):167-177

The purpose of this study was to identify whether or not immediate loading yields different clinical outcomes from conventional loading of single-tooth implants in the esthetic zone. Various databases (MEDLINE/PubMed, Cochrane [CENTRAL], and Embase) were searched electronically to find articles published in the English language from January 2000 to April 2018. Only randomized controlled clinical trials (RCTs) that compared conventional and immediate implant loading with a minimum follow-up period of 1 year or more were considered.

Seven RCTs were included. There was no significant difference between immediate and conventional loading protocols on implant survival at the 1-year follow-up. The differences regarding marginal bone loss between the two protocols were statistically

insignificant at the 1-year follow-up. Soft tissue changes following different loading protocols revealed no significant differences in the mesial papillae, the distal papillae, and the mid-facial mucosa at the 1-year follow-up. The esthetic outcomes and patient satisfaction were reported in two and three RCTs, respectively. *A short-term follow-up of single-tooth implants in the esthetic zone showed that the loading protocols (conventional or immediate loading) are not likely to influence the clinical outcomes, including implant survival and peri-implant stability of soft and hard tissues.*

Relationship between Mandible Fractures and Third Molars

Lee Y, Kim J, et al.
Arch Craniofac Surg. 2019 Dec;20(6):376-381

This study was conducted to determine the relationship between third molar (M3) and mandibular fracture. Patients with unilateral mandibular angle or condyle fractures between 2008 and 2018 were evaluated retrospectively. Medical records were reviewed regarding the location of fractures, and panoramic radiographs were reviewed to discern the presence and position of ipsilateral mandibular third molars (M3). The authors measured the bony area of the mandibular angle (area A) and the bony area occupied by the M3 (area B) to calculate the true mandibular angle bony area ratio (area A-B/area A × 100). The study consisted of 129 patients, of which 60 (46.5%) had angle fractures and 69 (53.5%) had condyle fractures.

The risk of angle fracture was higher in the presence of M3 and the risk of condyle fracture was lower in the presence of M3, than in the absence of M3. The risk of angle fracture was higher in the presence of an impacted M3 and the risk of condyle fracture was lower in the presence of an impacted M3, than in the presence of a fully erupted M3. True mandibular angle bony area ratio was significantly lower in the angle fractures than in the condyle fractures. *Angle fractures had significantly lower true mandibular angle bony area ratios than condyle fractures. True mandibular angle bony area ratio, a simple and inexpensive method, could be an option to predict the mandibular fracture patterns.*

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