

Dear Colleague:

Each year we continue to see growth and development in our practice accompanied by an increase in treatment success. Through this quarterly newsletter, we wish to share with you some of the latest developments in oral surgery and implant dentistry, as well as open communication with your office.

If we can provide any additional information, or if you would like to see an article on a particular topic in our next issue, please do not hesitate to call. We appreciate the trust you place in us by allowing us to participate in the care of your patients.

Regards,

Drs. Elyassi and Tebyanian

Benefits and Harms Associated with Analgesic Medications used in the Management of Acute Dental Pain

Moore PA, Ziegler KM, et al.
J Am Dent Assoc. 2018 Apr;149(4):256-265

Effective pain management is a priority in dental practice. Government and private agencies highlight the need to provide optimal pain relief, balancing potential benefits and harms of both opioid and nonopioid analgesic agents. The purpose of this study is to summarize the available evidence on the benefits and harms of analgesic agents, focusing on preexisting systematic reviews. An overview of systematic reviews was conducted to evaluate the efficacy or reported adverse events associated with orally administered medication or medication combinations for relief of acute pain. Reviews were inclusive of all age populations but were limited to those that evaluated medication and medication combinations marketed in the United States and had moderate or high methodological quality along with peer review.

Five reviews were found eligible for inclusion. The data identified combinations of ibuprofen and acetaminophen as having the highest association with treatment benefit in adult patients and the highest proportion of adult patients who experienced maximum pain relief. Diflunisal, acetaminophen, and oxycodone were found to have the longest duration of action in adult patients. Medication and medication combinations that included opioids were among those associated most frequently with acute adverse events in both child and adult-aged patient populations. *The best available data suggested that the use of nonsteroidal medications, with or without acetaminophen, offered the most favorable balance between benefits and harms, optimizing efficacy while minimizing acute adverse events.*

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Dr. Elyassi grew up in Potomac, Maryland, where he received his undergraduate degree from the University of Maryland and his Doctorate in Dental Surgery (DDS) degree from the University of Maryland, Baltimore College of Dental Surgery. He completed his Oral & Maxillofacial Surgery residency at Tripler Army Medical Center and is Board Certified with the National Dental Board of Anesthesiology, and is a Diplomate of the American Board of Oral & Maxillofacial Surgeons. Dr. Elyassi has been an Assistant Professor at Fort Hood, Texas, and Walter Reed. He has publications in various journals leading to the development of the surgery field along with several other publications in process.



Dr. Anis Tebyanian attended George Mason University and graduated with honors Summa Cum Laude in 2006. He continued to earn his DMD from the prestigious University of Connecticut School of Dental Medicine in 2010 and received his MD from Stony Brook School of Medicine in 2013. He completed a 6-year residency at Northwell Health, Northshore-LIJ in Oral & Maxillofacial surgery that included Medicine, General surgery and Anesthesia. Dr. Tebyanian trained in full scope Oral and Maxillofacial Surgery with heavy emphasis in Orthognathic and TMJ disorders.

The Influence of the Crown-Implant Ratio on the Crestal Bone Level and Implant Secondary Stability: 36-Month Clinical Study

Hadzik J, Krawiec M, et al.
Biomed Res Int. 2018 May 16

When the era of dental implantology began, the pioneers defined some gold standards used in dental prosthetics treatment for implant-supported restorations. Referring to traditional prosthetics, it was taken for granted that the length of an implant placed in the alveolar bone (the equivalent of the root) should exceed the length of the superstructure. The purpose of this study was to determine whether implant length and the crown-to-implant (C/I) ratio influence implant stability and the loss of the surrounding marginal bone and whether short implants can be used instead of sinus augmentation procedures.

The patients participating in the study (n = 30) had one single tooth implant, a short (OsseoSpeed™ L6 Ø4 mm, Implants) or a regular implant (OsseoSpeed L11 and L13 Ø4 mm, DENTSPLY Implants), placed in the maxilla. The evaluation was based on clinical and radiological examination. The crown-to-implant ratio was determined by dividing the length of the crown together with the abutment by the length of the implant placed crestally. Mean crown-to-implant ratios were calculated separately for each group and its correlation with the MBL (marginal bone loss) and stability was assessed. The authors compared the correlation between the C/I ratio values, MBL, and secondary implant stability.

Positive results in terms of primary and secondary stability were achieved with both (short and conventional) implants. The MBL was low for short and conventional implants being 0.34 mm and 0.22 mm, respectively. No significant correlation was found between the C/I ratio and secondary stability as well as the C/I ratio and the marginal bone loss. *Short implants can be successfully used to support single crowns. The study has revealed no significant differences in the clinical performance of prosthetic restorations supported by short implants.*

Efficacy of Different Methods Used for Dry Socket Prevention and Risk Factor Analysis

Taberner-Vallverdú M, Sánchez-Garcés MÁ, et al.
Med Oral Patol Oral Cir Bucal. 2017 Nov 1;22(6)

Dry socket is one of the most common complications that develops after the extraction of a permanent tooth, and its prevention is more effective than its treatment. Analyze the efficacy of different methods used in preventing dry socket in order to decrease its incidence after tooth extraction. A Cochrane and PubMed-MEDLINE database search was conducted with the search terms "dry socket", "prevention", "risk factors", "alveolar osteitis" and "fibrynolitic alveolitis", both individually and using the Boolean operator "AND". The inclusion criteria were: clinical studies including at least 30 patients, articles published from 2005 to 2015 and written in English. The exclusion criteria were case reports and nonhuman studies. 30 publications were selected from a total of 250. Six of the 30 were excluded after reading the full text. The final review included 24 articles: 9 prospective studies, 2 retrospective studies and 13 clinical trials. They were stratified according to their level of scientific evidence using a pre-determined scale.

All treatments included in the review were aimed at decreasing the incidence of dry socket. Locally administering chlorhexidine or applying platelet-rich plasma reduces the likelihood of developing this complication. Antibiotic prescription does not avoid postoperative complications after lower third molar surgery. *With regard to risk factors, all of the articles selected suggest that patient age, history of previous infection and the difficulty of the extraction are the most common predisposing factors for developing dry socket. There is no consensus that smoking, gender or menstrual cycles are risk factors. Taking the scientific quality of the articles evaluated into account, a strong recommendation has been given for the proposed-procedures in the prevention of dry socket.*

Impacted and Transmigrated Mandibular Canines: Analysis of 3D Radiographic Imaging Data

Bertl MH, Frey C, et al.
Clin Oral Investig. 2018 Feb 1

Impacted and transmigrated mandibular canines differ greatly in incidence, etiopathology, associated anomalies, and treatment prospects, when compared to their maxillary counterparts. The aim of this study was to provide a detailed analysis of 3D radiographic imaging data of impacted mandibular canines. In a retrospective cross-sectional study, CT/CBCT data of 88 patients with a total of 94 impacted mandibular canines were analysed. Evaluated parameters included location, morphology, neighbouring structures, associated anomalies, the influence of those factors on mandibular canine transmigration, as well as applied treatment.

Transmigration was found to occur in 40.4% of impacted mandibular canines. Transmigrated canines were located significantly more basally and horizontally angulated. Further, transmigration was significantly associated with a lack of contact to adjacent teeth and the canine's apex not contacting the mandibular cortical bone. The overall incidence of root resorptions of adjacent teeth related to impacted mandibular canines was 7.3% and was more likely, if the canine was lingually impacted. While about half of the non-transmigrated impacted canines were orthodontically aligned, half of the transmigrated canines were surgically removed. Monitoring was the second most applied treatment strategy for both groups, and no canines were autotransplanted. *Root resorption of adjacent teeth and transmigration are commonly occurring phenomena related to impacted mandibular canines. Treatment often entails the surgical removal of the canine-especially in cases of transmigration. The findings emphasise the importance of early diagnosis and CT/CBCT imaging for further diagnostics and future research of impacted mandibular canines.*

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