Oral Surgery Care

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Dear Colleagues,

May you have a happy and prosperous 2018!

Our quarterly newsletter includes a review of another double-blind pain study comparing an ibuprofen/acetaminophen combination, both with and without an opioid analgesic, following third molar removal. These results showed equal pain relief whether or not codeine was added to the ibuprofen/acetaminophen combination. This adds to the evidence indicating ibuprofen and acetaminophen, without an opioid, should be considered the first-line choice for post-procedural dental pain, unless there are overriding reasons to do otherwise.

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Pain management includes more than pills. Patient awareness, expectation and acceptance of a certain level of discomfort are important. Local measures, such as long-acting local anesthetic and ice, can be helpful. Quiet relaxation in the form of meditation, mindfulness, or whatever else you want to call it, is often overlooked. The goal is management of pain, not the complete absence of pain. We (and our patients) need to accept that some procedures will have some discomfort or pain afterwards.

Thank you again for including us in the care of your patients. We really appreciate it!

Best Regards,

Brent Florine, DDS

Efficacy of Codeine When Added to Paracetamol (Acetaminophen) and Ibuprofen for Relief of Postoperative Pain After Surgical Removal of Impacted Third Molars

Best AD, De Silva RK, et al.
J Oral Maxillofac Surg. 2017 Oct;75(10):2063-2069

The use of opioids in combination with nonopioids is common practice for acute pain management after third molar surgery. One such combination is paracetamol, ibuprofen, and codeine. The authors assessed the efficacy of codeine when added to a regimen of paracetamol and ibuprofen for pain relief after third molar surgery. This study was conducted in patients undergoing the surgical removal of at least 1 impacted mandibular third molar requiring bone removal. Participants were randomly allocated to a control group (paracetamol 1,000 mg and ibuprofen 400 mg) or an intervention group (paracetamol 1,000 mg, ibuprofen 400 mg, and codeine 60 mg). All participants were treated under intravenous sedation and using identical surgical conditions and technique. Postoperative pain was assessed using the visual analog scale (VAS) every 3 hours (while awake) for the first 48 hours after surgery. Pain was globally assessed using a questionnaire on day 3 after surgery.

There were 131 participants (36% men; control group, n = 67; intervention group, n = 64). Baseline characteristics were similar for the 2 groups. Data were analyzed using a modified intention-to-treat analysis and, for this, a linear mixed model was used. The model showed that the baseline VAS score was associated with subsequent VAS scores and that, with each 3-hour period, the VAS score increased by an average of 0.08. The treatment effect was not statistically meaningful, indicating there was no difference in recorded pain levels between the 2 groups during the first 48 hours after mandibular third molar surgery. Similarly, the 2 groups did not differ in their global ratings of postoperative pain. *The authors concluded that codeine 60 mg added to a regimen of paracetamol 1,000 mg and ibuprofen 400 mg does not improve analgesia after third molar surgery.*

Dr. Brent Florine received his undergrad degree from the University of Minnesota College of Liberal Arts and attended the University of Minnesota School of Dentistry. He received postgraduate dental and oral and maxillofacial surgery training at Louisiana State University and Charity Hospital in New Orleans, and the University of Minnesota Hospitals and Clinics. He is certified as a Diplomate of the American Board of Oral and Maxillofacial Surgery and has practiced oral surgery in Eagan since 1987.

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

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

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.*

Immediate Loading Short Implants Inserted on Low Bone Quantity for the Rehabilitation of the Edentulous Maxilla Using an All-on-4 Design

Maló P, de Araújo Nobre MA, et al.
J Oral Rehabil. 2016 Aug;42(8):615-23

The purpose of this study was to evaluate the use of short-length tapered implants in immediate loading for complete edentulous maxillae rehabilitations using an All-on-4 design. This retrospective clinical study included a cohort of 43 patients with 172 implants (74 short-length implants) inserted in low bone quantity. The patients were followed between 4 months and 6 years (average = 3 years). Outcome measures were implant survival, marginal bone remodeling, biological and mechanical complications.

Two patients with four short-length implants were lost to follow-up during the first year. Three short and three long implants failed in four patients, rendering an overall cumulative survival rate implant and patient level, respectively, of 95.7% and 95.1% for short implants, 100% for regular implants and 96.6% and 95.2% for long implants. The average marginal bone remodelling at 1 and 3 years was 0.97 and 1.25 mm for the short implants, 0.82 and 0.87 mm for regular implants and 0.87 and 0.98 mm for long implants. Three patients presented 4 short-length implants with peri-implant pockets (3 implants in 2 patients were pseudo-pockets). Mechanical complications were registered in 13 patients (7 provisional prostheses fractures and 6 abutment screw loosening). All complications were treated successfully. *The authors concluded that the short-term outcome of fixed prosthetic complete edentulous maxillae rehabilitations supported by short-length implants inserted in low bone quantity areas is viable. Long-term clinical studies are necessary for evaluating the outcome of these implants.*

Anterior Single Implants with Different Neck Designs: 5 Year Results

den Hartog L, Meijer HJA, et al.
Implant Dent Relat Res. 2017 May 23

The design of the implant neck might be significant for preservation of marginal bone. The purpose of this study was to compare the 5-year radiographic and clinical outcome of single anterior implants provided with a smooth neck, a rough neck or a scalloped rough neck. Ninety three patients with a missing anterior tooth in the maxilla were included. At random, patients received an implant with a 1.5 mm smooth neck ("smooth group"), a rough neck with grooves ("rough group") or a scalloped rough neck with grooves ("scalloped group"). Implants were installed in healed sites. Follow-up visits were conducted after final crown delivery and 1 year and 5 years later.

Scalloped implants showed significantly more initial marginal bone resorption. The total amount of bone loss was 1.26 mm in the smooth group, 1.20 mm in the rough group and 2.28 mm in the scalloped group. Survival rates were 96.2% for the smooth and scalloped group and 100% for the rough group. *Scalloped implants showed deeper pocket depths, more bleeding and more technical complications. There were no differences in esthetic outcome or in patient satisfaction. For anterior single tooth replacements, scalloped implants show less favorable radiographic and clinical outcome compared to regular implants with a smooth neck or rough neck.*

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