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Winter 2023/2024 - A Quarterly Update

Dr. Eric Holmgren is originally from the island of Coronado near San Diego, California.

He attended college at the University of California at Santa Barbara where he majored in Mechanical Engineering. He then completed graduate education in Mechanical Engineering earning his Master's Degree at the University of Vermont, specifically studying bio-mechanical engineering. He also had the wonderful fortune of meeting his wife there who is native to Vermont and a past German professor. Prior to starting his dental and medical training he worked as an engineer at Qualcomm, Inc in San Diego.

Dr. Holmgren's interest in dentistry, medicine, and surgery led him to attend dental school at the University of Pennsylvania earning his Doctorate in Dental Medicine (DMD) and ultimately medical school at the Oregon Health and Science University in Portland earning his Medical Degree (MD). At Oregon Health and Science University he completed a year of general surgery internship and his oral/maxillofacial surgery training.


Eric Holmgren, DMD, MD

He is excited to join Capitol Center for Oral and Maxillofacial Surgery on a part time basis providing oral surgery care focused on removal of wisdom teeth, extractions, bone grafting, and dental implant procedures. Dr. Holmgren spends his other clinical time as an Assistant Professor of Surgery with the Department of Otolaryngology/Maxillofacial Surgery at Dartmouth Health and the Geisel School of Medicine. He focuses his clinical time at his hospital based practice on treating patients with facial trauma, head and neck pathology, management of medically complex patients who need extractions, and corrective jaw surgery. Dr. Holmgren also teaches medical students, surgery residents, and has research projects he collaborates with at Thayer School of Engineering.

As a side hobby, Dr. Holmgren has a particular interest in Sports Medicine. He is the Williams College Men's Lacrosse Sports Physician and the assistant Sports Physician for Men's Football and Hockey providing sideline physician care and supervision. He is a certified Ringside Physician for the State Athletic Commission of Massachusetts providing ringside medical and surgical care for both amateur and professional MMA and boxing events. He had the privilege of being a ringside physician assisting injured fighters on ESPN for boxing fight night venues and on Fox / Pay-Per-View for several UFC bouts at Boston TD Garden.

Dr. Holmgren and his wife have three daughters and they thoroughly enjoy living in New England. His Family spends considerable time in Austria where his children attend school part time. Although he struggles and is often corrected by his daughters, German is spoken fluently in the Holmgren household.

Antibiotic Prophylaxis in the Prevention of Dry Socket and Surgical Site Infection after Lower Third Molar Extraction

O Camps-Font, H Sabado-Bundo, et al.
Int J Oral Maxillofac Surg 2023 Aug 21

Clinicians frequently prescribe systemic antibiotics after lower third molar extractions to prevent complications such as surgical site infections and dry socket. A systematic review of randomized clinical trials was conducted to compare the risk of dry socket and surgical site infection after the removal of lower third molars with different prophylactic antibiotics. The occurrence of any antibiotic-related adverse event was also analyzed. Appropriate statistical analysis was performed to establish direct and indirect comparisons of each outcome variable. Sixteen articles involving 2158 patients (2428 lower third molars) were included, and the following antibiotics were analyzed: amoxicillin (with and without clavulanic acid), metronidazole, azithromycin, and clindamycin.

Pooled results favored the use of antibiotics to reduce dry socket and surgical site infection after the removal of a lower third molar, with a number needed to treat of 25 and 18, respectively. *Although antibiotic prophylaxis was found to significantly reduce the risk of dry socket and surgical site infection in patients undergoing lower third molar extraction, the number of patients needed to treat was high. Thus, clinicians should evaluate the need to prescribe antibiotics taking into consideration the patient's systemic status and the individual risk of developing a postoperative infection.*

The Effect of Initial Biologic Width on Marginal Bone Loss

Ping Sun, Dan Yu, et al.
Int J Oral Maxillofac Implants 2022 Jan-Feb;37(1):190-198

The purpose of this study was to evaluate the short-term effect of dental implant placement, mucosa thickness, and their combined effects (initial biologic width) on marginal bone loss. This study included patients who received implant surgery in the posterior region without bone augmentation surgery between 2012 and 2016, and implants had been loaded for more than 12 months. Each patient received radiographic examination before and

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Initial Biologic Width...*continued*

after implant surgery, before the stage-two surgery, and during the 1- to 5-year follow-up. The thickness of mucosa, depth of dental implant placement, and crestal bone loss were evaluated on digital radiographs. The interaction was discussed by defining the combination of initial mucosal thickness and implantation depth as the initial biologic width. The implants were divided into four study groups based on the quartile of the initial biologic width.

This study included 266 patients (94 male and 172 female, 22 to 85 years of age, mean age: 51years), with 413 dental implants placed including 239 Straumann implants and 174 Ankylos implants. The average follow-up was 21.50 months. After 1 to 5 years, the median crestal bone loss around implants was 0.35 mm (0.30 mm for Straumann BL and 0.40 mm for Ankylos). The implants were divided into four groups: group A (≤ 2.85 mm), group B (2.85 to 3.40 mm), group C (3.40 to 3.97 mm), and group D (> 3.97 mm). Group B showed significantly less crestal bone loss than group A (0.38 mm vs 0.25 mm) and group C (0.25 mm vs 0.40 mm) during the follow-up. Significantly more crestal bone loss around implants was observed in the thin mucosa group than in the thick mucosa group (0.50 mm vs 0.30 mm), while implants placed beneath the bone level displayed a significantly higher amount of marginal bone loss than implants placed even with the bone crest (0.50 mm vs 0.10 mm). The initial biologic width has an effect on crestal bone loss. When the initial biologic width was between 2.85 and 3.40 mm, the marginal bone loss was lowest. *Based on radiographic evaluation, implants placed in thick gingiva and even with the bone level showed less alveolar marginal bone loss compared with implants placed in thin gingiva and below the crestal bone level.*

Practice Patterns for Initial Management of Oral Leukoplakia Amongst Otolaryngologists and Oral and Maxillofacial Surgeons

Andrew Birkeland, Deepak Kademani, et al.
Oral Oncol 2023 Apr;139:106341

Oral leukoplakia is encountered frequently by otolaryngologists and oral and maxillofacial surgeons (OMFS). There are no consensus practice management guidelines for oral leukoplakia, resulting in heterogeneity in practice patterns. Characterization of practice patterns of providers who treat oral leukoplakia will be valuable to establish standards of care and future practice guidelines. A survey was designed by the American Head and Neck Society Cancer Prevention Service collecting demographic and practice management data for treating oral leukoplakia. The survey was approved and distributed to members of the American Academy of Otolaryngology-Head and Neck Surgery and American Association of Oral and Maxillofacial Surgeons. Data analysis was performed using appropriate statistical analysis.

396 responses were collected: 83 OMFS, 81 head and neck fellowship-trained providers, and 232 otolaryngologists (non-head and neck fellowship-trained). Providers saw a wide volume of oral leukoplakia (23.0% >30 cases/year, 35.1% 11-30 cases/year, 41.2% 10 or less cases/year), with OMFS seeing more cases of oral leukoplakia. Factors most associated with consideration of initial biopsy included physical exam findings (94.4%), erythroplakia (82.3%), and smoking status (81.6%). The majority of respondents saw patients in follow-up within 1 month (24.8%) or within 1-3 months (46.5%). *This survey identifies a range of practice patterns in initial management of oral leukoplakia, including indications for biopsy, and time for follow-up. This data provide insight into practice patterns amongst different groups of providers and can potentially lead to consensus guidelines for initial management of oral leukoplakia.*

Third Molar Surgical Difficulty Scales: Systematic Review and Preoperative Assessment Form

C Gay-Escoda, A Sanchez-Torres, et al.
Med Oral Patol Oral Cir Bucal 2022 Jan 1;27(1)

The main objective of this systematic review was to collect the pre-existing scales for assessing the difficulty of third molar extraction. The secondary objective was to design a proposal for a preoperative evaluation protocol for the difficulty of third molar extraction. Two independent researchers conducted an electronic search in Pubmed (MEDLINE), Cochrane, and Scopus databases during March 2021. Included studies evaluated the prediction of the difficulty of surgical removal of impacted upper or lower third molars using new indices/scales or pre-existing scales with or without modifications. Articles referring to coronectomies or assessing pre-surgical difficulty using other tools were excluded. Neither language nor publication date restrictions were applied.

Out of 242 articles, 13 prospective cohort studies were finally selected. Seven developed new indices/scales, and 6 assessed the predictive ability of some pre-existing scales. Most of the indices/scales contained radiological variables and few added any patient-related variables. The authors in this study proposed a preoperative assessment protocol of the difficulty of third molar extraction to facilitate treatment planning and/or considerate referral in cases of high difficulty. This proposal used patient-related, radiological and surgical variables. *The investigators concluded that a preoperative protocol to evaluate the surgical difficulty, including different patient-specific, radiological and surgical variables, could facilitate treatment planning, help clinicians prevent complications and assess the possibility of referral.*