Contents

Preface: Appreciation xiii
Harry Dym

Emergency Drugs for the Oral and Maxillofacial Surgeon Office 1
Joel Rosenfeld and Harry Dym

This article illustrates the indications and mechanism of action of core emergency medications as well as emergency medications for intravenous sedation in the oral and maxillofacial surgeon office. The recognition of medical emergencies and comprehensive knowledge of pharmaceutical medical intervention can prevent deterioration in medical emergencies. In addition, this article also reviews common dosages as well as administration techniques that should be regularly reviewed and be fundamental knowledge to the oral surgeon and staff.

Update on Medications for Oral Sedation in the Oral and Maxillofacial Surgery Office 9
Monica Hanna, Peter Chen, and Earl Clarkson

Dental anxiety is a leading cause of postponing treatment and/or complete avoidance of professional oral care. Therefore, effective sedation and pain control are integral components of dental care for the fearful and anxious patient. The application of oral sedation aids the trained practitioner to provide care to the anxious dental patient and remains the safest, most established, and most commonly used route of drug administration. Proper training and understanding of pharmacologic properties allows for safe and effective application of analgesics and sedatives for oral sedation.

A Review of Sedation Agents 21
Hillel Ephros, Sneha Shah, and Robert J. Herrod

The oral and maxillofacial surgery model of anesthesia delivery is the subject of some controversy. However, a long track record of patient safety provides compelling support for the dual role of the oral and maxillofacial surgeon as proceduralist and anesthetist. Among the elements critical to continued success is a clear understanding of the pharmacology of the agents used to produce sedation and general anesthesia. This review highlights 6 sedation agents used as part of a balanced anesthesia technique in oral and maxillofacial surgery.

Acute Pain Management 35
Nabil Moussa and Orrett E. Ogle

Control of acute pain in oral and maxillofacial surgery is important for patient care and comfort. Oral surgical procedures are associated with tissue injury and inflammation. Acute pain can arise directly from a surgical procedure or from problems such as dental caries, infection, perforation of maxillary sinus, pericoronitis, and jaw fractures. The major factor in acute pain management is deciding on an appropriate intervention and/or analgesics that will provide the best pain relief. Multimodal pain control has taken a leading role in effectively managing acute pain. This article covers the different options available to dental clinicians.
Temporomandibular joint disorder is defined by pain and/or loss of function of the temporomandibular joint and its associated muscles and structures. Treatments include noninvasive pharmacologic therapies, minimally invasive muscular and articular injections, and surgery. Conservative therapies include nonsteroidal anti-inflammatory drugs, muscle relaxants, benzodiazepines, antidepressants, and anticonvulsants. Minimally invasive injections include botulinum toxin, corticosteroids, platelet-rich plasma, hyaluronic acid, and prolotherapy with hypertonic glucose. With many pharmacologic treatment options and modalities available to the oral and maxillofacial surgeon, mild to moderate temporomandibular joint disorder can be managed safely and effectively to improve symptoms of pain and function of the temporomandibular joint.

This article aims to provide the practitioner with therapeutic options to treat a broad spectrum of acute and chronic orofacial pain syndromes. The focus will be nonsurgical that the oral health care physician can implement to treat this population of patients. The World Health Organization estimated that more than 1 in every 3 people suffers from acute or chronic pain. This article is primarily devoted to medication management once the diagnosis of neuropathic pain, a true trigeminal neuralgia, or a variant of trigeminal neuralgia often referred to as traumatic neuropathic pain or traumatic trigeminal neuralgia.

Headaches are synonymous with neurovascular pain (cephalalgias), which comprise a heterogeneous group of pain disorders that share a common anatomic region (head and neck). Headaches are often a “universal” disease presentation that is evaluated by the oral and maxillofacial surgeon. Pharmacologic therapy of headaches is most often based on the severity of symptoms and the degree of disability experienced by the patient. This article describes the epidemiology of neurovascular headaches, their pathophysiologic mechanisms/presentation, the workup of patients, and an up-to-date overview of pharmacologic approaches that can be applied in the oral and maxillofacial surgical practice to treat this patient population.

Soft tissue lesions commonly seen in the oral cavity tend to overlap in their onset, presentation, and location making it difficult to appreciate their etiology. In some instances, common oral soft tissue lesions can create confusion due to similar clinical appearance or unusual presentation; therefore, proper diagnosis of the lesion is key in pharmacologic management. In ulcerative conditions, topical steroids can decrease the symptoms and improve healing time, but do not affect the recurrence rate. Always be suspicious of soft tissue lesions that are nonresolving or recurrent lesions as they may warrant further investigation to rule out malignancy or associated systemic conditions. This article discusses key clinical presentations and the proper topical and systemic pharmacologic treatments.
Corticosteroids have been the cornerstone for treatment of many inflammatory and immune disorders with these beneficial effects well recognized by the medical community. It also possesses many undesirable clinical adverse effects that can occur within 2 weeks of use. Moreover, in the past decade, chronic users of corticosteroids have been linked to skeletal (vertebral and hip) osteoporosis/osteonecrosis with some patients requiring adjunctive antiresorptive medications to counteract fracture prevention. Additionally, two case reports have implicated daily prednisone user to cause osteonecrosis of the mandible. This chapter highlights current adrenal suppression classifications, pathophysiology, drug interactions, and perioperative surgical and anesthesia management.

Selective serotonin reuptake inhibitors (SSRIs) have been the cornerstone for the treatment of depression, anxiety, obsessive-compulsive disorder, and panic disorder for a wide spectrum of age groups. Although the beneficial therapeutic properties are well recognized by the medical community, it also possesses many undesirable adverse effects with clinical manifestations. Some of the effects can be severe. This chapter highlights use of SSRIs, the mechanism of action, medication dosages, common drug to drug interactions, and recommendations on management of the oral and maxillofacial surgery patient on SSRIs.

In this chapter, the authors review the benefits of saliva and the destructive consequences of its loss. It is hoped that this will help their colleagues identify and treat patients before development of symptoms. Xerostomia is the subjective complaint of dry mouth or sensation of oral dryness. Hyposalivation is the actual decrease in measured salivary outflow. The authors discuss a compiled list of highly cited medications commonly used today that are linked with xerostomia and hyposalivation. There are numerous treatment modalities that are present, such as saliva substitutes, mouth rinses, sugar-free candy, and pilocarpine among others.

Use of topical and local anesthesia (LA) is the workhorse of all aspects of dentistry. There was a time in the past when dentistry was performed without any local pain control. Owing to this there are patients with dental anxiety and fear of a dental office. The media portraying dentistry as being painful, or showing a dentist with needles, enlists fear and distrust of dentists. In contrast, pain is what brings the patient to the dental office and with local pain control measures a dentist is able to alleviate the patient’s cause of pain.

Antibiotic prophylaxis is the use of antibiotics in the perioperative period to prevent surgical site infections from local flora. Specific guidelines and criteria exist to...
prevent these infections while also practicing antimicrobial stewardship. Most den- 
toalveolar procedures do not require antibiotic prophylaxis. For nondentoalveolar 
procedures, the decision to provide antibiotic prophylaxis is based on involvement 
of the respiratory, oral, or pharyngeal mucosa. Special considerations exist for pa-
tients at high risk for infective endocarditis, patients with head and neck cancer, 
and temporomandibular joint replacement procedures. This article discusses indica-
tions for antibiotic prophylaxis during oral and maxillofacial surgical procedures.

Update on Antimicrobial Therapy in Management of Acute Odontogenic Infection in Oral 
and Maxillofacial Surgery 169
Sam R. Caruso, Elena Yamaguchi, and Jason E. Portnof

This article focuses on the antimicrobial therapy of head and neck infections from 
odontogenic origin. Odontogenic infections are among the most common infections 
of the oral cavity. They are sourced primarily from dental caries and periodontal dis-
ease (gingivitis and periodontitis). Many odontogenic infections are self-limiting and 
may drain spontaneously. However, these infections may drain into the anatomic 
spaces adjacent to the oral cavity and spread along the contiguous facial planes, 
leading to more serious infections. Antibiotics are an important aspect of care of the 
patient with an acute odontogenic infection. Antibiotics are not a substitute for 
definitive surgical management.

Medication Management of Selected Pathological Jaw Lesions 179
Yijiao Fan and Allen Glied

Most jaw lesions are treated surgically. Areas of abnormal proliferation or destruction 
in bone are commonly treated by regional curettage, excision, or resection. However, 
surgery is invasive and leaves a defect where the lesion was removed. Surgical trauma 
to adjacent healthy tissue, including vital neurovascular bundles is often unavoidable, 
and can be especially traumatizing to the pediatric patient. Select jaw lesions with 
well-studied nonsurgical pharmaceutical treatments are presented here.

Pharmacology of Aesthetic Medicines 189
Natalie Dunlop, Shelly Abramowicz, and Elda Fisher

The realm of aesthetic medicine is broad, and there are countless medications and 
topical agents used in the practice of aesthetic medicine. The most commonly used 
injectable medicines include botulinum toxin for mimetic lines and hyaluronic acid 
fillers for deeper facial rhytids and volume rejuvenation. Topical aesthetic medicines 
are useful adjuncts for facial rejuvenation and commonly include tretinoin, hydroqui-
none, growth factors, and vitamin C, as well as a wide range of chemical peels.

Medication for Gravid and Nursing Oral and Maxillofacial Surgery Patients 201
Yoav Nudell and Jared Miller

The purpose of this article is to clarify clinically impactful features of the perioperative 
and postoperative pharmacologic management of pregnant and lactating patients in 
the maxillofacial or dental setting. Before prescribing any drug to a nursing mother or 
pregnant patient, the maxillofacial surgeon and other dental and medical providers 
should consider the available evidence, benefits, and risk for that particular drug. 
There are many complex factors to consider when prescribing in order to maintain 
the safety of the pregnant individual, fetus, and infant. This article aims to provide 
concise, memorable, and actionable information to use in your clinical practice.