

Contents

Preface ix

Michael D. Turner and Robert Glickman

The Bacteriology of Salivary Gland Infections 269

Itzhak Brook

The parotid gland is the salivary gland most commonly affected by inflammation. However, infection of the salivary glands can occur in any of the glands. The most common pathogens associated with acute bacterial infection are *Staphylococcus aureus* and anaerobic bacteria. The predominant anaerobes include: anaerobic Gram negative bacilli (eg, pigmented *Prevotella* and *Porphyromonas*); *Fusobacterium* spp; and *Peptostreptococcus* spp. In addition, *Streptococcus* spp (including *Streptococcus pneumoniae*) and aerobic and facultative Gram-negative bacilli (including *Escherichia coli*) have been reported. Aerobic and facultative Gram-negative bacilli are often seen in hospitalized patients. Organisms less frequently found are *Haemophilus influenzae*, *Treponema pallidum*, *Bartonella henselae*, and *Eikenella corrodens*. *Mycobacterium tuberculosis* and atypical mycobacteria are rare causes of infection. The choice of antibiotics should be guided by identification of the etiologic agent.

Diagnostic Imaging in Sialadenitis 275

Johannes Zenk, Heinrich Iro, Nils Klintworth, and Michael Lell

This article presents a survey of the imaging procedures in inflammatory changes of the salivary glands. State-of-the-art procedures are described along with a perspective on recent innovations. Various imaging procedures are discussed, including ultrasound, computed tomography, and magnetic resonance imaging. Then, imaging options in different forms of acute and chronic sialadenitis are considered. The choice of method is guided by consideration of the reliability, the side effects, the accessibility, and, ultimately, the costs. The focus is mainly on diagnostic ultrasound and resonance methods because, with their aid, the investigation of almost all the inflammatory diseases of the large salivary glands can be performed with accurate results, without exposing the patient to radiation.

Diagnosis and Management of Salivary Gland Infections 293

Eric R. Carlson

Salivary gland infections are frequently encountered entities that are acquired in community and hospital settings. These infections have many causes and may be treated with a diverse array of modalities ranging from conservative medical therapy to removal of the affected salivary gland. Minimally invasive techniques employing diagnostic and interventional sialoendoscopy exist between these two extremes. If possible, the goal of management of such infections is to preserve the gland. It is the purpose of this article to review the diagnosis and treatment of acute and chronic salivary gland infections.

Indications, Techniques, and Complications of Major Salivary Gland Extirpation 313

Amy K. Hsu and David I. Kutler

This article reviews major salivary gland anatomy and the differential diagnosis of salivary gland disease. The surgical technique for parotid and submandibular gland

excision is described in detail. Possible complications and their management are also discussed, followed by a brief literature review of new surgical techniques.

Sialoendoscopy and Salivary Gland Sparing Surgery **323**

Michael D. Turner

Obstructive disease and chronic infections often are managed by extirpative gland surgery. With the advent of new technology and better understanding of salivary physiology, minimally invasive surgical techniques provide the opportunity for safer and less invasive surgery in alternative care settings and the prospect for gland sparing and restoration of normal function. This article describes techniques for managing acute and chronic salivary gland infections using sialoendoscopy.

Non-HIV Viral Infections of the Salivary Glands **331**

Andrea Schreiber and Gabriel Hershman

Historically, the most significant non-HIV viral infection of salivary glands has been, and remains, mumps. Despite the widespread administration of mumps vaccines worldwide, sporadic outbreaks continue to be reported. Epidemiologic studies are invaluable in understanding the etiology of these outbreaks. Information gleaned from these studies, coupled with advances in immunology, virology, and DNA/RNA testing will hopefully result in the development of vaccination regimens to ensure eradication of the disease.

HIV-associated Salivary Gland Disease **339**

Rabie M. Shanti and Shahid R. Aziz

The authors review the clinical presentation, diagnostic evaluation, and treatment modalities for salivary gland enlargement in an HIV-infected population. Because this can occasionally be the presenting clinical symptom of HIV infection, it is important for the oral/maxillofacial surgeon to diagnose and manage HIV salivary gland enlargement.

Diagnosis and Management of Pediatric Salivary Gland Infections **345**

Ashish Patel and Vasiliki Karlis

The incidence of salivary gland infections in the pediatric population is low but not infrequently seen in pediatric oral and maxillofacial surgery practices and hospital environs. With an ever increasing armamentarium of diagnostic tools and medical and surgical therapies, these patients can be managed successfully with minimum morbidity and decreased incidence of recurrences.

Epidemiology of Salivary Gland Infections **353**

Luke Cascarini and Mark McGurk

This article approaches sialadenitis from a personal perspective based on 15 years of clinical practice limited mainly to salivary gland diseases. Disorders of the salivary glands are uncommon. When they occur, experience in managing the process is diluted over a range of disciplines. The result is that traditional views go unchallenged and are recast unchanged from one textbook to another. Sialadenitis of bacterial origin is a relatively uncommon occurrence today and is normally associated with sialoliths. The most common viral infection of the salivary glands is mumps.

Case Presentations of Salivary Gland Infections **359**

Michael D. Turner and Robert Glickman

Salivary gland infections arise from a wide variety of etiologies: bacteria, localized viruses, systemic viruses, autoimmune diseases, secondary to sialoliths and strictures, and congenital disorders. When dealing with these entities, the diagnosis of the majority of them can be made quickly, although some of the rarer diseases are more difficult to recognize, particularly when they have a more obvious secondary bacterial infection. This article presents six cases and describes their management.

Index **363**