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Pediatric Benign Soft Tissue Oral and Maxillofacial Pathology 1
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Despite the many types of oral pathologic lesions found in infants and children, the most commonly encountered are benign soft tissue lesions. The clinical features, diagnostic criteria, and treatment algorithms of pathologies in the age group from birth to 18 years of age are summarized based on their prevalence in each given age distribution. Treatment modalities include both medical and surgical management.

Pediatric Head and Neck Malignancies 11
Mohammed Qaisi and Issam Eid

Head and neck malignancies are rare in pediatric patients and represent 12% of all pediatric malignancies. The incidence for these head and neck tumors is 1.49 cases per 1,000,000 person-years. Among the most common pediatric head and neck malignancies are lymphomas (27%), neural tumors including primitive neurectodermal tumors (23%), thyroid malignancies (21%), soft tissue sarcomas including rhabdomyosarcoma (12%), nasopharyngeal carcinoma, skeletal and odontogenic malignancies including osteosarcoma, Ewing sarcoma, and ameloblastic carcinoma. This article presents an overview of pediatric head and neck malignancies with emphasis on diagnosis and management.

Pediatric Odontogenic Cysts of the Jaws 21
Kevin Arce, Christopher S. Streff, and Kyle S. Ettinger

Odontogenic cysts represent a common form of pathology of the jaws, and the natural history, clinicopathologic findings, and appropriate management strategies are important to the oral and maxillofacial surgeon. Odontogenic cysts in the pediatric populations are important pathologic entities given their potential impact on the growth and development of the maxillofacial complex. Inappropriate management strategies can severely affect the form and function of the growing child. Categorizing pediatric odontogenic cysts into inflammatory or developmental causes provides a convenient way of conceptualizing these various entities and helps facilitate the appropriate diagnosis and the subsequent management.

Nonodontogenic Cysts of the Jaws and Treatment in the Pediatric Population 31
Richard Scott Jones and Jasjit Dillon

Nonodontogenic cysts within the jaws are not a common presentation in the pediatric population. Cysts within the pediatric population tend to be developmental and odontogenic in nature. Although nonodontogenic cysts of the jaws are relatively uncommon, it is imperative that the clinician understands their clinical behavior and management, because failure to do so can result in increased patient morbidity. The
nonodontogenic cysts of the jaws that are most often encountered are the central
giant cell granuloma, traumatic bone cavity, aneurysmal bone cyst, nasopalatine
duct cyst, and nasolabial cyst. This article reviews common clinical findings, radiographic features, histopathologic features, and current treatments of nonodontogenic cysts.

**Pediatric Odontogenic Tumors**

Joshua M. Abrahams and Shawn A. McClure

Pediatric odontogenic tumors are rare and are often associated with impacted teeth. Although they can develop anywhere in the jaws, odontogenic tumors mainly occur in the posterior mandible. This article discusses the diagnosis and treatment of the most common pediatric odontogenic tumors, such as ameloblastoma, keratocystic odontogenic tumor, odontoma, and cementoblastoma.

**Nonodontogenic Tumors of the Jaws**

Donita Dyalram, Nawaf Aslam-Pervez, and Joshua E. Lubek

Nonodontogenic tumors of the jaws are common in the pediatric population, accounting for approximately 70% of pediatric jaw tumors. This article focuses on the clinical characteristics and management of the benign nonodontogenic tumors (nonaggressive and aggressive) of the jaws most commonly encountered in children.

**Benign Pediatric Salivary Gland Lesions**

Eric R. Carlson and Robert A. Ord

Salivary gland lesions are rare in pediatric patients. In addition, the types of salivary gland tumors are different in their distribution in specific sites in the major and minor salivary glands in children compared with adults. This article reviews benign neoplastic and nonneoplastic salivary gland disorders in pediatric patients to help clinicians to develop an orderly differential diagnosis that will lead to expedient treatment of pediatric patients with salivary gland lesions.

**Pediatric Salivary Gland Malignancies**

Robert A. Ord and Eric R. Carlson

Pediatric malignant salivary gland tumors are extremely rare. The percentage of malignant tumors is higher than that seen in adults, although the outcomes in terms of survival are better in pediatric patients. The mainstay of treatment is surgical excision with negative margins. This article reviews current concepts in demographics, etiology, management, and outcomes of malignant salivary tumors in children.

**Vascular Malformations and Their Treatment in the Growing Patient**

Antonia Kolokythas

Vascular anomalies consisting of two groups of lesions, vascular tumors and vascular malformations, frequently arise in the head and neck and often occur in the pediatric age group. This classification is based on the differences in natural history, histologic features, and cellular turnover of the two groups. The management of these anomalies can be challenging, and evidence-based decisions about treatment are complicated.
by an inconsistency in the nomenclature for these lesions found in the literature. This article covers the clinical presentation, etiology, and pathophysiology and treatment approaches of the vascular anomalies in the pediatric population.

**Pediatric Vascular Tumors of the Head and Neck**

Carl Bouchard, Zachary S. Peacock, and Maria J. Troulis

Oral and maxillofacial surgeons are often involved in the diagnosis and treatment of vascular neoplasms of the head and neck. An incorrect diagnosis may lead to improper or unnecessary treatment. This article reviews the diagnosis and management of vascular tumors.

**Strategies to Overcome Late Complications from Radiotherapy for Childhood Head and Neck Cancers**

Michael T. Spiotto and Philip P. Connell

Most pediatric head and neck cancers are treated with radiotherapy, but the morbidity associated with radiotherapy has become a prominent issue. This article discusses the common long-term complications associated with head and neck radiotherapy for childhood cancers. It reviews approaches to minimize toxicity and details the toxicities that head and neck radiation inflicts on relevant functional measures. In addition, it discusses the risk of radiation-induced secondary cancers in childhood cancer survivors, as well as strategies to reduce them. Thus, this article addresses approaches to minimize long-term radiation toxicities in order to improve the quality of life for childhood cancer survivors.

**Chemotherapy in Children with Head and Neck Cancers: Perspectives and Review of Current Therapies**

Daniel K. Choi and Mary Lou Schmidt

Cancers of the head and neck in children represent a heterogeneous group of malignancies requiring a variety of treatment modalities. In many instances of childhood head and neck cancers, chemotherapy will be required for treatment, often in conjunction with surgery and/or radiation therapy. Chemotherapy in children with head and neck cancers poses unique challenges in terms of immediate as well as long-term toxicities. This article focuses on the common chemotherapeutic agents, with a particular focus on early and late effects, used in the treatment of children with head and neck cancers.