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Pleomorphic adenoma of the salivary glands in children and adolescents☆

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Abstract

Background: Pleomorphic adenomas (PAs) of the salivary glands are rare in children and adolescents. We reviewed the clinical manifestations, pathologic features, treatment, and prognosis of salivary gland PA in 90 children and adolescents.

Methods: Clinical data including age, sex, location, symptoms, the period of evolution of the symptoms, pathologic type, and surgical treatment were evaluated.

Results: The median age was 16.5 years old. There was a 1.43:1 female-to-male ratio. The parotid gland was the most commonly affected major gland (56.7%), and the palate, the most common site of minor salivary gland involvement. Ultrasonography and computed tomography were performed in most cases for diagnosis. Superficial parotidectomy or total parotidectomy with facial nerve dissection and preservation was the most common surgical procedure. Submandibular triangle dissection was applied to all submandibular PAs. Classic-type PA was the most common histologic subtype (43.3%).

Conclusions: Salivary gland PAs in children and adolescents have different characteristics compared with their adult counterparts in regard to histologic subtype and location. Surgical removal is the best treatment option for PAs in children and adolescents.

Pleomorphic adenomas (PAs) are the most common benign neoplasms in salivary glands. Pleomorphic adenomas occur at any age but occur more commonly in patients between 30 to 60 years old and are slightly more frequent in women (male-to-female ratio 1:1.39). Pleomorphic adenomas in children and adolescents are rare when compared with adults [1-14] and have differing characteristics from those observed in their adult counterparts. In this study, we review 90 cases of salivary gland PAs occurring in children and adolescents who were treated in the Department of Oral and

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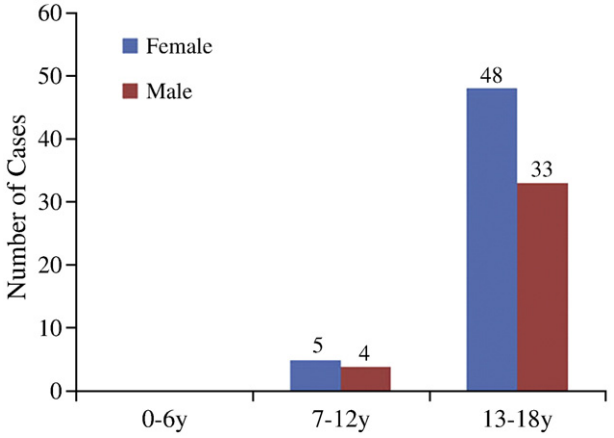

Fig. 1 Age and sex characteristics of children and adolescents with salivary gland PAs.

Maxillofacial Surgery in Shanghai Ninth People's Hospital, China, over a period of 20 years.

1. Patients and methods

Ninety patients younger than 18 years at the time of diagnosis were selected for this retrospective study among 4341 cases of PA treated over a 20-year period (1990-2010) at our institution. Two children with recurrent tumors had initially been treated elsewhere. Clinical data, including age, sex, location, symptoms, the period of evolution of the symptoms, pathologic type, and surgical treatment, were evaluated. Histologically, the tumors were classified as myxoid (stroma-rich), cellular (cell-rich), or classic (balanced amount of epithelial and stromal components), as described by Seifert et al [12]. Hematoxylin and eosin–stained slides of all cases were reexamined and classified by Dr LZ Wang according to pathologic descriptions of the World Health Organization Pathology and Genetics of Head and Neck Tumors (2005) [8].

2. Results

2.1. Demographic data

Among the 90 cases, 37 cases were male, and 53 were females (male-to-female ratio was 1:1.43). The median age was 16.5 years with a range of 10 to 18 years. Nine children (10%) were younger than 12 years, and 81 cases (90%) were adolescents (13-18 years old) (Fig. 1).

2.2. Presentation

The parotid glands were most commonly involved (51/90; 56.7%) followed by the submandibular glands (28/90; 31.1%), the palatal minor glands (8/90; 8.9%), and the buccal minor glands (3/90; 3.3%) (Fig. 2). One case occurred in the deep lobe of the parotid gland.

Most tumors presented as slowly growing nontender masses. Slight tenderness was found in only 6 cases (6/90; 6.7%). One recurrent parotid tumor presented with paralysis at the initial operative site. The tumor size ranged from 0.5 to 4 cm. The duration of symptoms ranged from 20 days to 4 years (mean, 12.8 months). Deep lobe parotid PAs presented as a bulge of the lateral pharyngeal wall on intraoral examination. In the palate, all of the tumors were seen at the junction of the hard and soft palate.

2.3. Clinical treatment

All patients underwent surgical treatment for their tumors. The parotid lesions were excised by superficial parotidectomy or total parotidectomy with facial nerve dissection and

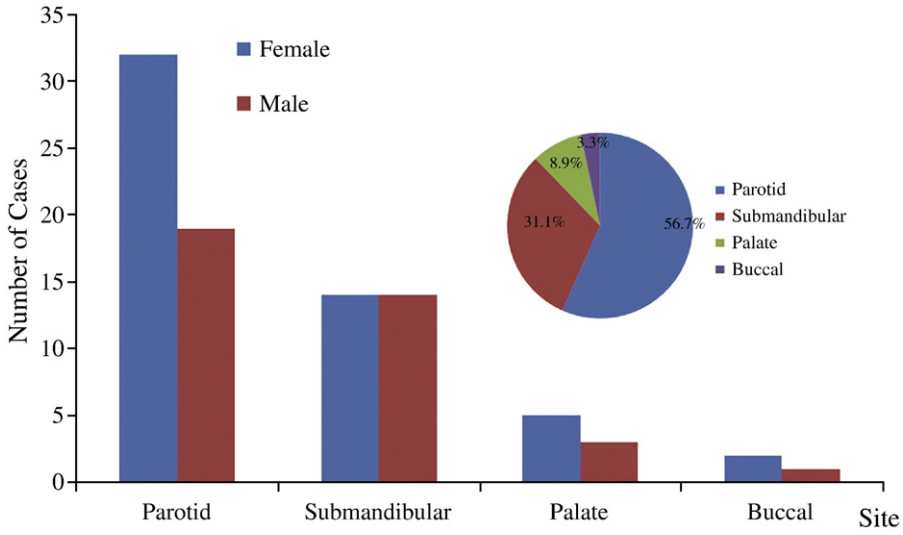

Fig. 2 Anatomical location of 90 cases of salivary gland PAs in children and adolescents.