e - ISSN - 2349 - 8005

INTERNATIONAL JOURNAL OF ADVANCES IN CASE REPORTS

Journal homepage: www.mcmed.us/journal/ijacr

PLEOMORPHIC ADENOMA OF THE PALATE IN A 13 YEAR OLD CHILD: A CASE REPORT

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Article Info
Received 15/10/2014
Revised 27/10/2014
Accepted 12/11/2014

Key words:
Pleomorphic Adenoma, Palatal Swelling, Salivary Gland Tumor etc.

ABSTRACT
Salivary gland tumors are rare in children and the incidence differs from the adult counterpart. When salivary gland tumors do arise in children, they preferentially affect major salivary glands, but minor salivary gland tumors have also been reported. This is the first case report of palatal pleomorphic adenoma in a 13 year-old child. The oral mucosa covering the lesion was intact. Occlusal radiograph revealed no bony destruction. Incisional biopsy was performed on the site. The biopsy showed several ducts which were lined by cuboidal cells. These ducts were surrounded by myoepithelial cells, some of which had the plasmacytoid appearance. Differential diagnoses of a palatal swelling in children and management of pleomorphic adenoma at the palate are also discussed in this article.

INTRODUCTION

Pleomorphic adenoma is also known as Mixed Tumor, Enclavoma, Branchioma, Endothelioma, Enchondroma. Salivary gland tumors account for less than 3% of the head and neck tumors [1]. They are more common in adults than in children [2,3]. Only 0.32-5% of all salivary gland tumors occur in children aged 16 years or younger [4]. Among all salivary gland tumors, pleomorphic adenoma is the most frequently encountered lesion, accounting for approximately 60% of all salivary gland neoplasms [5,6]. It also ranks as the most common salivary gland neoplasm in children, representing 66-90% of all salivary gland tumors [7]. Most salivary gland tumors occur in major salivary glands, especially the parotid gland. Pleomorphic adenoma is the most common salivary gland tumor predominantly occurs in the parotid gland. As far as the intraoral salivary gland tumors are concerned, pleomorphic adenoma also ranks as the most frequently encountered lesion [8,9]. Palate is the most common affected site. The second most common site is the upper lip followed by buccal mucosa [10]. Pleomorphic adenomas in minor salivary glands are rare in children and predominantly occur in the palatal glands. Other intraoral sites include upper lips, buccal mucosa, tongue and gingiva [11,12].

Case Report

A 13 year old girl was referred to Department of Oral and Maxillofacial Surgery, Institute of Dental Education & Advance Studies, Gwalior with the chief complaint of a swelling at the right side of the palate (Figure 1). Her medical history was non-contributory and she denied drug allergy. She gave the history that the swelling had been there for 5 months, but grew quite rapidly in the past 3 months. Intraoral examination revealed a soft tissue mass 1.5 x 2 cm situated adjacent to the maxillary right molars. No discharge from swelling overlying palatal mucosa. The oral mucosa covering the lesion was intact. The lesion was rubbery in consistency and no tenderness on palpation was observed. Occlusal radiograph revealed no bony destruction. Incisional biopsy was performed on this patient. Microscopically, the lesion revealed stratified squamous epithelium covering the

connective tissue. The underlying connective tissue showed several ducts which were lined by cuboidal cells. These ducts were surrounded by myoepithelial cells, some of which had the plasmacytoid appearance (Figure 2). Some of the ducts contained amorphous eosinophilic materials. The diagnosis was pleomorphic adenoma. The patient was treated by wide local excision with the placement of upper stent.

Management

Under general anesthesia with nasotracheal intubation, mouth gag was placed to increase the access to lesion in the palate. Local anesthetic solution containing 1:200000 adrenaline was infiltrated around the lesion. Mucosa around the lesion was marked & incised using the surgical blade approximately 1cm away.

Wide excision of the lesion was done with surgical blade & dissecting scissors. Haemostasis was achieved with electrocautery. The lesion was excised along with its fibrous capsule. During surgery, the tumor was found to be embedded in a bony cavity in the palate, possibly due to erosion from the growing lesion.

After the tumor was removed, curettage of the walls and floor of the bony cavity was done using a bur under copious sterile normal saline irrigation, to ensure that no remnants of the lesion remained to cause recurrence. There was no communication between the bony cavity in the hard palate and the nasal cavity. The flap was closed with 3/0 vicrylsutures, and an acrylic palatal plate was inserted for 3 days to prevent postoperative hematoma as the patient had a low hemoglobin level (10.3 g/dL).

Figure 1. Photograph Showing a Swelling at the Left Side of the Palate

Figure 2. Histopathological Picture of Pleomorphic Adenoma

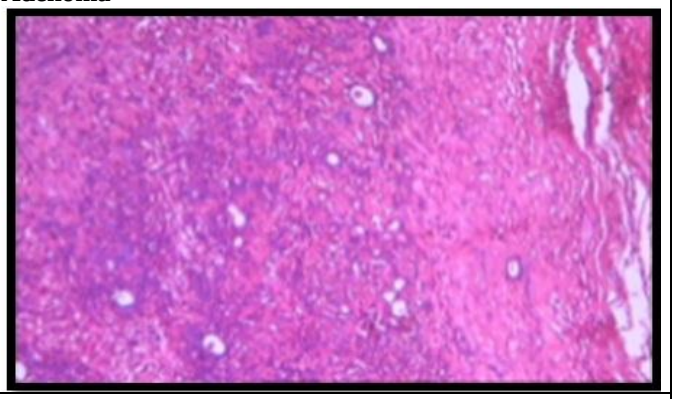

Figure 3. Mucosa around the Lesion Was Marked

Figure 4. Surgical Procedure

Figure 4. Excised Tumour

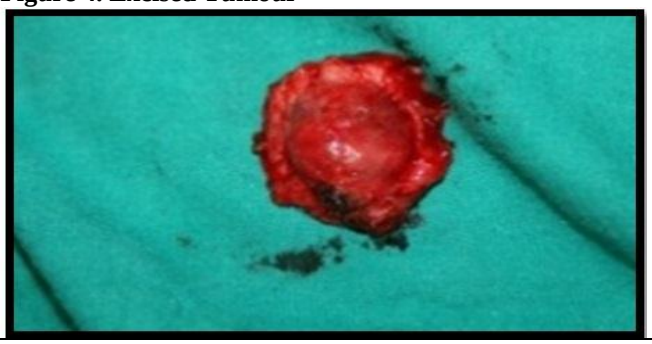

Figure 5. Post-Operative Area

DISCUSSION

Pleomorphic adenoma is the most common neoplasm of the salivary glands, affecting mainly the parotid gland. As far as the intraoral salivary gland tumors are concerned, pleomorphic adenoma also ranks as the most frequently encountered lesion [13-15]. Palate is the most common affected site. The second most common site is the upper lip followed by buccal mucosa [16-18]. Mucoepidermoid carcinoma is the most common malignant salivary gland tumor while pleomorphic adenoma is the most common benign counterpart. Pleomorphic adenoma at the palate is rare. The differential diagnosis for this case includes palatal abscess, odontogenic and non-odontogenic cysts, soft tissue tumors and salivary gland tumors. Palatal abscess can be ruled out by clinical examination since the source of palatal abscess, which is typically a nonvital tooth in vicinity or a localized periodontal defect, was not found. In addition, this patient showed no sign of inflammation. Both odontogenic and non-odontogenic cysts can be ruled out at the time of exploration into the mass since it did not demonstrate cystic nature. Palatal tissues contain components of soft tissue and harbour minor salivary gland tissues. As a result, soft tissue tumors such as fibroma, lipoma, neurofibroma, neurilemmoma as well as salivary gland tumors should also be considered in the differential diagnoses for this case. The treatment of choice for pleomorphic adenoma in minor salivary gland is wide local excision with the removal of periosteum or bone if they are involved. [17] Simple enucleation of this tumor is believed to leading to high local recurrence rate and should be avoided. Rupture of the capsule or tumor spillage is also believed to increase the risk of recurrence, so meticulous dissection is paramount. Pleomorphic adenoma generally does not recur after adequate surgical excision [19].

CONCLUSION

Pleomorphic adenoma has emerged as a different entity regards to diagnosis & treatment modalities. It is a mixed tumor of salivary gland & needs an adequate histopathological examination with proper selection of treatment. Pleomorphic adenoma can be managed well & has got excellent prognosis if followed up properly and handled with caution & care.

REFERENCES

1. Luna MA, Batsakis JG, El-Naggar AK. (1991). Salivary gland tumors in children. *Ann Otol Rhinol Laryngol*, 100, 869-71.
2. Bradley P, McClelland L, Mehta D. (2007). Paediatric salivary gland epithelial neoplasms. *ORL J Otorhinolaryngol Relat Spec*, 69, 137-45.
3. Shaaban H, Bruce J, Davenport PJ. (2001). Recurrent pleomorphic adenoma of the palate in a child. *Br J Plast Surg*, 54, 245-7.
4. Dhanuthai K, Banrai M, Limpanaputtajak S. (2007). A retrospective study of paediatric oral lesions from Thailand. *Int J Paediatr Dent*, 17, 248-53.
5. Callender DL, Frankenthaler RA, Luna MA, Lee SS, Goepfert H. (1992). Salivary gland neoplasms in children. *Arch Otolaryngol Head Neck Surg*, 118, 472-6.
6. Aver-De-Araujo LM, Chaves-Tarquinio SB, Neuzling-Gomes AP, Etges A. (2002). Intraosseous pleomorphic adenoma, case report and review of the literature. *Med Oral*, 7, 164-70.
7. Eveson JW, Cawson RA. (1985). Tumours of the minor (oropharyngeal) salivary glands, a demographic study of 336 cases. *J Oral Pathol*, 14, 500-9.
8. Dorairajan N, Periyasamy S, Muthayya P, Manikandan R, Srinivasan T, Siddharth D. (2004). Salivary gland tumors, a 10-year retrospective study of survival in relation to size, histopathological examination of the tumor, and nodal status. *Int Surg*, 89, 140-9.
9. Rodríguez-Fernández J, Mateos-Micas M, Martínez-Tello FJ, Berjón J, Montalvo JJ, Forteza-González G, et al. (2008). Metastatic benign pleomorphic adenoma. Report of a case and review of the literature. *Med Oral Patol Oral Cir Bucal*, 13, E193.
10. Jansisyanont P, Blanchaert RH Jr, Ord RA. (2002). Intraoral minor salivary gland neoplasm, a single institution experience of 80 cases. *Int J Oral Maxillofac Surg*, 31, 257-61.
11. Chen YK, Lin LM, Lin CC, Yan YH. (1998). Palatal pleomorphic adenoma in a child with osteoid formation, report of case. *ASDC J Dent Child*, 65, 209-11.
12. Noghreyan A, Gatot A, Maor E, Fliss DM. (1995). Palatal pleomorphic adenoma in a child. *J Laryngol Otol*, 109, 343-5.
13. Aver-De-Araujo LM, Chaves-Tarquinio SB, Neuzling-Gomes AP, Etges A. (2002). Intraosseous pleomorphic adenoma, case report and review of the literature. *Med Oral*, 7, 164-70.
14. Dorairajan, Periyasamy, Muthayya, Manikandan R, Srinivasan T, Siddharth D. (2004). Salivary gland tumors, a 10-year retrospective study of survival in relation to size, histopathological examination of the tumor, and nodal status. *Int Surg*, 89, 140-9.
15. Rodríguez-Fernández J, Mateos-Micas M, Martínez-Tello FJ, Berjón J, Montalvo JJ, Forteza-González G, et al. (2008). Metastatic benign pleomorphic adenoma. Report of a case and review of the literature. *Med Oral Patol Oral Cir Bucal*, 13, E193-6.

16. Jansisyanont P, Blanchaert Jr, Ord RA. (2002). Intraoral minor salivary gland neoplasm, a single institution experience of 80 cases. *Int J Oral Maxillofac Surg*, 31, 257-61.
17. Sonesson M, Eliasson L, Matsson L. (2003). Minor salivary gland secretion in children and adults. *Arch Oral Biol*, 48, 535-9.
18. Ledesma-Montes C, Garces-Ortiz M. (2002). Salivary gland tumours in a Mexican sample. A retrospective study. *Med Oral*, 7, 324-30.
19. Ogata H, Ebihara S, Mukai K. (1994). Salivary gland neoplasms in children. *J Clin Oncol*, 24, 88-93.