Monomorphic Adenoma of Posterior Palate: A Rare Case Report

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Abstract

Background: Minor salivary gland benign tumors account for a very small percentage of salivary gland tumors of which monomorphic adenomas are a rare entity.

Methods and Findings: The present case report discusses a rare case report of an 18-year-old female patient diagnosed with monomorphic adenoma of the posterior palatal region. The diagnosis was reached after thorough radiographical and pathological investigations.

Conclusion: Monomorphic Adenoma in a younger individual is a rare disorder and can be used as a collective term for benign or malignant tumors comprising of one type or even two types of cells.

Keywords: Monomorphic adenoma; Salivary gland Disorder; Fine Needle Aspiration Cytology (FNAC); Posterior Palate.

Introduction

Monomorphic Adenoma of minor salivary glands refers to a benign tumor that consists of more uniform or single type of cells as opposed to Pleomorphic Adenoma that comprises of a variety of cells with variable morphology of both epithelial and mesenchymal origin [1]. This term was originally used first time by Rauch, Seifert, and Gorlin in 1970. They distinguished monomorphic adenomas from pleomorphic adenomas in that the former exhibited “a regular, uniform cell structure, the presence of a basement membrane, and a pronounced lobular structure” [2].
monomorphic adenoma: the adenolymphoma (papillary cystadenoma lymphomatosum), the oxyphilic adenoma (oncocytoma), and “other types” [2,3]. Whereas, Batsaki in his study identified two of the least familiar monomorphic adenomas of salivary glands- the inverted ductal papilloma of the oral cavity and the canalicular adenoma, also generally an oral and/or labial tumor [4]. To simplify one can say that Canalicular Adenoma and Basal Cell Adenoma (being more common) due to the presence of a uniform type of cells can be categorized as a few of the subtypes of Monomorphic adenoma [1]. Also, as originally this tumor represents a group of tumors rather than a separate entity, therefore, it can be used as a specific diagnosis as well [2].

The junction of the hard and soft palate is the most common site for minor salivary gland tumors. 55% of tumors occur in the palate while the lips (upper lip>lower lip) account for 15% of such tumors. The remaining are distributed about equally among the other glands in the floor of the mouth, retromolar region, cheek, tongue, and peritonsillar area [5]. According to Chaudhary et al, 60 % of both benign and malignant tumors occurred in the palate [6]. The prevalence of monomorphic adenoma is not very predominant. According to a study done by Waldron et al., monomorphic adenomas constituted approximately 10% of benign lesions with nearly three-fourths of these occurring on the upper lip [3]. In another study done by Mishra et al on the prevalence and presentation of minor salivary glands in the Indian population, this tumor accounted for 9% of the benign tumors and 6% of all the tumors [5]. One study done by Cho et al. revealed the occurrence of monomorphic adenoma of about 4 % of all Primary Epithelial Salivary Gland Tumor reported in 10 years [7]. These tumors are more common in females than males, with a ratio range from 1.2:1-1.9 :3,8. But few authors like, Nelson et al., suggested that the sex distribution was approximately equal for this lesion [9].

The present case report describes a rare minor salivary gland tumor of monomorphic adenoma variety occurring on the hard palate in a younger individual, various investigations that lead to its diagnosis followed by its treatment.

Case Report

An 18-year-old female patient reported to the Department of Oral Medicine and Radiology, Kothiwal Dental College and Hospital, Moradabad, Uttar Pradesh, India with a chief complaint of a slow-growing swelling on the palatal region for 1.5 years. The patient was asymptomatic with no history of pain, bleeding and pus discharge. The patient had no deleterious habits. On physical examination, it was observed that the swelling was located on the hard palate lying in the left first and second molar region not crossing the midline. The swelling was oval with a dimension of 2cm × 1.2 cm anteroposteriorly (Figure 1a). The color of the swelling was similar to the color of the adjacent overlying mucosa. The border of the swelling was smooth and indistinct. On palpating, it was noticed that there was no rise in temperature. The swelling was not-tender, non-fluctuant, non-mobile, soft to firm in consistency, non-pulsating, non-compressive having a smooth texture. Also, no pus discharged or bleeding was observed. The provisional diagnosis of a
minor salivary gland tumor involving the posterior part of the hard palate was given.

**Figure 1:** (a) Intra-oral representation of the lesion; (b) Surgical exposure of the lesion; (c) 15 days post-operative picture showing complete remission of the lesion.

Upon radiographical examination, Occlusal and Intra-oral periapical radiograph revealed no radiolucency on the maxillary left posterior palatal region suggesting the confinement of the swelling up to soft tissue only and no involvement of any hard tissue (Figure 2 (a,b)). On further investigating, Cone Beam Computed Tomography (CBCT) revealed soft radiodensity in the concerned region with thinning of the palatine bone secondary to pressure effect from the swelling. Also, no dental abnormality, as well as no involvement of maxillary sinuses, bilaterally was observed in CBCT (Figure 2c).

**Figure 2:** (a) IOPAR of the left maxillary region; (b) Occlusal radiograph showing the Lesion; (c) CBCT of the maxilla showing the lesion.

Fine Needle Aspiration Cytology (FNAC) was done with a 10 ml 23-gauge syringe which revealed smears with fibrillar chondromyxoid ground substance consisting of epithelial cells present singly and in poorly cohesive clusters and sheets. The nuclei of the cells were ovoid with bland nuclear chromatin and well-defined cytoplasm. Also, few spindle-shaped mesenchymal cells were seen in the mesenchymal stromal matrix. Histopathological specimen confirmed the diagnosis of Monomorphic Adenoma of Hard Palate.

Since Benign tumors of the salivary gland need no treatment other than surgical removal (Figure 1b), therefore, the patient was advised the same. The patient was recalled after 15 days for suture removal and follow-up (Figure 1c). It was seen that the surgical site was completely healed. The patient had no relapse or recurrence in the further postoperative phase.

**Discussion**

The lesions which are properly classified as adenomas are rare in most reports of tumors of the salivary vary gland [10,11] Specific types of salivary gland adenomas
has been reported as basal cell adenomas, and as monomorphic adenoma, canalicular type [10]. The monomorphic adenomas as being documented occurs predominantly in females mostly in the fifth or sixth decade of life [12,13]. While Waldron et al documented that the mean age of occurrence of Monomorphic adenomas ranged in age from 31 to 81 years [3], Chaudhary et al reported that the benign tumors of salivary gland origin occurred with almost equal frequency from the second to the ninth decades with an average age of 45.8 years except for the third decade, in which there was an incidence of 33 percent [6]. Also, Nelson et al in their clinical study suggested that the mean age for monomorphic adenoma of canalicular type is of 18 years [9]. Since, age of the patient is a significant factor, as this tumor almost always affects older people, the present case discussed a rare occurrence of monomorphic adenoma on the hard palate in a young female of 18 years of age.

Another important clinical feature is the site of occurrence of this lesion. While few authors suggested that upper lips are the most common site of occurrence [9,13], others thought that palate was the most common site [3,5]. In the present case, the lesion was present on the posterior part of the palate not crossing the midline.

Mader et al. suggested that the color of the mucosa overlying lesions of monomorphic adenoma varieties is a significant factor in determining the vascularity of the lesion [13]. In the present case, the color of the overlying mucosa of the lesion is similar to that of the adjacent mucosa suggesting a lack of blood pool within the lesion.

Waldron et al. identified monomorphic adenoma as benign glandular tumors commonly designated as basal cell adenoma, trabecular adenoma, canalicular adenoma, or tubular adenoma. In some instances, however, this classification is imprecise and difficult because of “overlapping” histologic features, therefore, these lesions can be simply reported as monomorphic adenoma [3]. Dardick et al. suggested that there have been divergent interpretations of the cellular organization of salivary gland monomorphic adenomas. There are two classes of these lesions, one composed of two types of tumor cells and the other wholly or predominantly made up of one type of cell (isomorphic) [14]. In the present case, FNAC revealed the presence of epithelial cells as well as spindle-shaped mesenchymal cells, suggesting an adenoma of somewhat, two cell- variety, therefore, the final diagnosis was given as Monomorphic Adenoma only without specifying a particular type.

Conclusion

Important clinical characteristics and diagnostic criteria of this uncommon minor salivary gland tumor are discussed in this case report. The patient whose case is reported is of a rare variety as she is 18 years of age showing a variety of monomorphic adenoma located on palate having more than one variety of cells. Since it is a benign lesion, surgical excision is the best treatment of choice.

Acknowledgment

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References


