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Pleomorphic Adenoma in Palatal Region of a Young Patient: A Case Report

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ABSTRACT

Pleomorphic adenoma is the most common benign tumor of the salivary glands. Its gender tendency is in females and mostly in the age of 20-45 years. mixed tumor has a firm consistency and no bone involvement. The mocusal memberan on it is healthy and has a normal color. It grows slowly and expands slowly.The parotid region, as the major salivary gland and the minor salivary gland, especially the palatal is the main site of this lesion. Cases of malignant changes have been found in it and it can turn into carcinoma. The patient is an 11-year-old girl without any underlying disease who referred to the outpatient clinic of Maxillofacial Surgery in Bahonar Kerman Hospital in Iran. The patient complained of a swelling in the left plat region, which he said had started about three months ago and was getting bigger. In examining the consistency of the lesion, it was firm and its color was pink like the mucosa of the normal palate. The uniformity of the mucosa was preserved on it. The dimensions of the lesion were about 3 x 2.5 square centimeters. The patient did not express pain or discomfort. First, a panoramic radiograph (OPG) was prepared. And then CBCT images were prepared with one millimeter slices. In the examination of the lesion, expansion is seen along with specific limits of the borders. The lesion did not destroy the palatine bone and did not invade the maxillary sinus. No pus drainage, inflammation, or redness was evident in the examination, and tenderness was not reported by the patient.then she refered to the endodontics part for examination of vitality tests. All of the teeth were vital. After performing diagnostic work, the patient was prepared for biopsy and enucleation and curettage of the lesion. After explaining to the patient and his parents and obtaining informed consent for the treatment and surgery. At first aspiration was done and the result was negative, then a sulcular incision was made from the area of the 4th upper right tooth to the 7th upper left mesial. After dissection, the mass was completely removed and enucleated. The mucosa of the floor of the nose remained healthy, and the area was completely curettage with a curet while maintaining the health of the nasal mucosa. Soft tissue sutured with 0-4 vicryl. Then, she underwent periodical follow-ups and the sample was sent for pathology examination. And the answer was diagnosed by seeing epithelial and myoepithelial cells in a chondromyxoid field with a capsule with well defined border, Pleomorphic Adenoma. Minor salivary glands are scattered throughout the upper respiratory-digestive system and their number is between 450-1000 and more in the oral cavity [13]. In a study conducted by Tselcos and his colleagues in 2022, the most common pleomorphic site of oral adenoma was diagnosed in the palatal region [14]. There is a difference of opinion in the treatment of pleomorphic adenoma of the palate. Some believe that enucleation with preservation of the upper mucus and some suggest extensive excision. Due to the nature of the capsule, which of course is thick in some patients and thin in some patients and attached to the palatal mucosa or absent [1], wide excision with a safe margin of 1cm is suggested by most surgeons. excision and shaving of the palatal bone in the form of a ostectomy was not needed to reduce the recurrence of the lesion, because the nature of the tumor is not an osteoblast stimulator for bone formation.

Keywords: Pleomorphic adenoma; Palatal area; Enuclation.

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Introduction

Pleomorphic adenoma is the most common salivary gland tumor. which affects minor and major glands. Its most common location is in the major salivary glands, parotid, and in the minor salivary glands, the palate. This benign mixed tumor has a gender tendency towards females and occurs mostly in the age group of 20-75 years [1,2]. In 1972, the World Health Organization (WHO) reported pleomorphic adenoma as a benign tumor with well-defined boundaries and including various epithelial, mucoid, myxoid and chondroid compositions [3] found in routine physical examinations [4,5]. Clinically, it is a painless submucosal mass with a firm consistency. It grows slowly and increases in size over the years. The mucosa on the lesion is healthy and intact, and if a wound is observed, it can indicate trauma or previous sampling [6]. The risk of malignancy in minor salivary glands is high and this doubt is strengthened when a mass is in these areas [7-9]. Imaging plays a vital role in diagnosis. Preparation of initial panoramic radiography and then preparation of facial spiral CT scan images with fine cuts of 1.5mm can determine the extent of bone involvement and the extent of tumor invasion to the surrounding structures [10]. Sampling and histological examination is a powerful tool in accurate diagnosis of the lesion. Pleomorphic adenoma is composed of epithelial and myoepithelial cells. Which sometimes is surrounded by a fibrous tissue called pseudocapsule. This pseudocapsule is complete in major salivary glands but sometimes incomplete in minor salivary glands [11,12].

Case Presentation

The patient is an 11-year-old girl without any underlying disease who referred to the outpatient clinic of Maxillofacial Surgery in Bahonar Kerman Hospital in Iran. The patient complained of a swelling in the left plat region, which she said had started about three months ago and was getting bigger. In examining the consistency of the lesion, it was firm and its color was pink like the mucosa of the rest of the palate. The uniformity of the mucus was preserved on it. The dimensions of the lesion were about 3 x 2.5 square centimeters. The patient did not express pain or discomfort. First, a panoramic radiograph (OPG) was prepared. And then CBCT images were prepared with one millimeter slices. In the examination of the lesion, expansion is seen along with specific limits of the borders. The lesion did not destroy the palatine bone and did not invade the maxillary sinus. No pus drainage, inflammation, or redness was evident in the examination, and tenderness was not reported by the patient. then she refered to the endodontics part for examination of vitality tests. All of the teeth were vital. After performing diagnostic work, the patient was prepared for sampling and enucleation and curettage of the lesion. After explaining to the patient and his parents and obtaining informed consent for the treatment and surgery, the patient was taken to the operating room. Then she underwent nasal intubation from the right nastriol. After preparation and drape and injection of lidocaine anesthesia containing epinephrine, first aspiration was done with a 10cc syringe and the result was negative, then a sulcular incision was made from the area of the 4th upper right tooth to the 7th upper left mesial. Dissection was performed and minor nasopalatine artery bleeding was controlled. And the greater palatine artery remained undamaged. After exposing the mass with a clear thick capsule, it was decided to completely dissection the mass from the palatal mucosa. After dissection, the mass was completely removed and enucleated. The mucosa of the floor of the nose remained healthy, and the sharp bones in the empty space were punched with a rongeur to prevent perforation of the mucosa, and the area was completely curettage with a medium-sized curet while maintaining the health of the nasal mucosa.

Then the area was completely washed with normal saline. And after checking the position and making sure that there is no remaining lesion and placing gel foam to control hemostasis and prevent possible hematoma, the soft tissue and the papillae were sutured with 0-4 vicryl. Then a sterile gauze with tetracylin ointment 1% was placed in the area as a compress dressing. The patient was extubated and transferred to recovery. And after partial recovery, she was transferred to the ward and under the antibiotic regimen of cefazolin 500 mg every 6 hours and dexamethasone 4 mg every 8 hours for two days and 0.2% chlorhexidine mouthwash twice a day and using ice pack and head elevation45 degree. She discharged after three days. Then, she underwent periodical follow-ups and the sample was sent for pathology examination. And the answer was diagnosed by seeing epithelial and myoepithelial cells in a chondromyxoid field with a capsule with well defined border, pleomorphic adenoma.

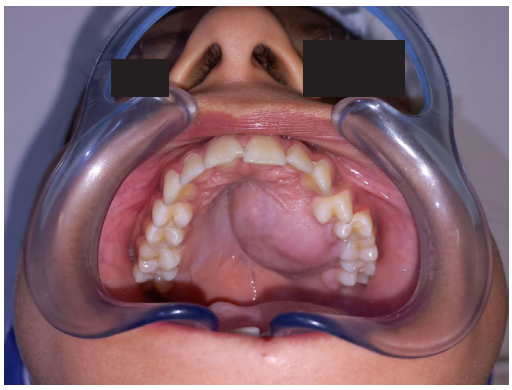

Figure 1. Clinical view of mass in left side of palate.

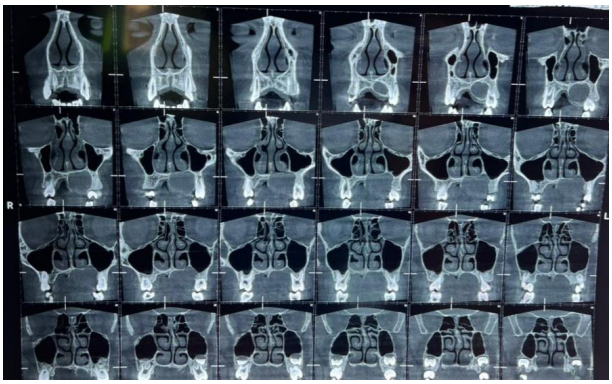

Figure 2. Coronal cut of CBCT–expansion of the lesion but not invasive to the maxillary sinus.

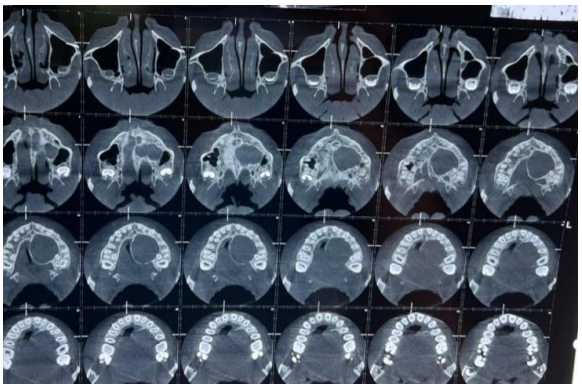

Figure 3. Axial cut of CBCT-extension of the lesion.

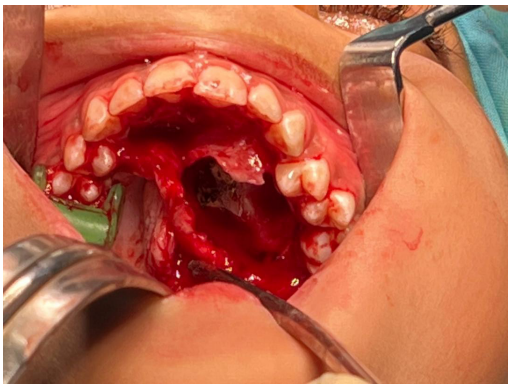

Figure 4. The palatal bone after complete enuclation and curettage is limited to midline.

Figure 5. The gross complete lesion.

Figure 6. Tumor dissection.

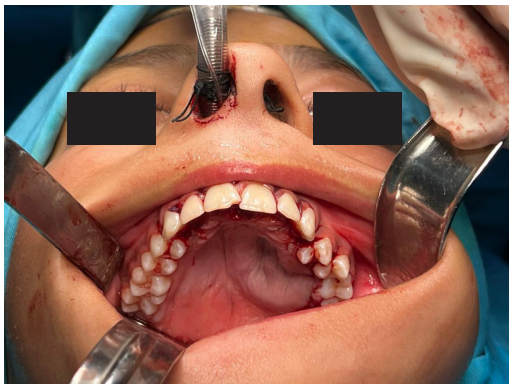

Figure 7. After suturing the palatal mucosa.

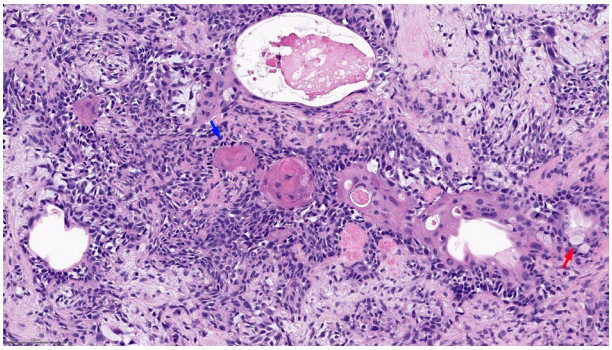

Figure 8. Pleomorphic Adenoma histologic features.

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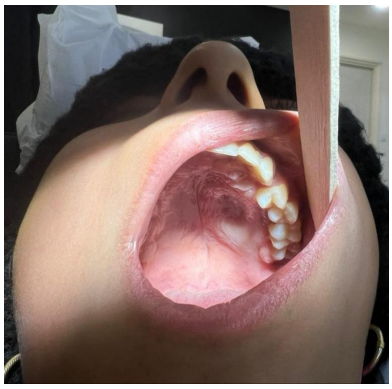

Figure 9. 3 month after operation follow up.

Discussion

Minor salivary glands are scattered throughout the upper respiratory-digestive system and their number is between 450-1000 and more in the oral cavity [13]. In a study conducted by Tselcos and his colleagues in 2022, the most common pleomorphic site of oral adenoma was diagnosed in the palatal region [14]. There is a difference of opinion in the treatment of pleomorphic adenoma of the palate. Some believe that enucleation with preservation of the upper mucus and some suggest extensive excision. Due to the nature of the capsule, which of course is thick in some patients and thin in some patients and attached to the palatal mucosa or absent [1], wide excision with a safe margin of 1cm is suggested by most surgeons. excision and shaving of the palatal bone in the form of a ostectomy was not needed to reduce the recurrence of the lesion, because the nature of the tumor is not an osteoblast stimulator for bone formation. In a study conducted by Abbate and his colleagues in Italy in 2019, he examined the long-term follow-up of patients who underwent surgery in 2002-2016. And he examined the complications caused by the removal of the

pleomorphic adenoma tumor in the parotid and other places, most of which were hematoma and hypoesthesia in the removal of the superficial lobe of the parotid, and then temporary damage to the facial nerve and Frey's syndrome were noted [15]. In a retrospective study conducted by Studart Soares and et al in 2016 on the Brazilian population, different approaches to pleomorphic adenoma surgery in the palatal region were discussed, including tumor excision by removing the mucosa covering it, tumor removal with bone ostectomy around the lesion. And the last method was the spontaneous regression of the lesion following an incisional biopsy. The most complications were patient discomfort and dysphonia. Soares considered the most effective treatment to be the complete removal of the tumor and its covering mucosa with or without ostectomy [16]. In 2021, a study was done by Tamba and his colleagues in Senegal on a 61-year-old woman with giant pleomorphic adenoma measuring 24x35x47 (mm), and after two months, a prosthesis was placed to reconstruct the palate, and after 6 months of follow-up, no recurrence was reprted [17].

Conflict of Interest

There is no conflict of interest to declare.

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