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Pleomorphic Adenoma of the Minor Salivary Gland on the Palate

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Abstract

Pleomorphic adenoma is the most common benign tumor of the salivary glands. Its main location is in the parotid gland, with minor glands being less common; but when it appears in the latter, the palate is its most common location. This publication presents a case of a 27-year-old female patient who attended the Dentistry Service of the Presidente Perón de Avellaneda General Acute Interzonal Hospital, presenting with a swelling in the upper right palate at tooth level 1.6. She underwent surgery and the pathological result confirmed the diagnosis of pleomorphic adenoma of the minor salivary gland. This tumor is rare in the minor salivary glands and represents 15-23% of all glandular neoplasms.

Keywords

Pleomorphic adenoma; Salivary gland; Palate; Tumor

Introduction

Tumors of the minor salivary glands are rare, accounting for 2% to 4% of head and neck tumors, 10% of benign neoplasms of the oral cavity, and 15% to 23% of all salivary glands [1]. Pleomorphic adenoma grows slowly, with signs and symptoms that may vary depending on the anatomical site affected, but are mostly painless. It is considered a benign neoplasm [2] and is generally located in the parotid glands (85%), and the submandibular glands (5%). In most cases, tumors originate in the superficial lobe. However, in specific cases it can affect the deep lobe of the parotid gland and the parapharyngeal space. Among the minor salivary glands, the palate is considered the most common intraoral site, followed by the lip, cheek, tongue, and floor of the mouth [3-6]. Pleomorphic adenoma of the minor salivary glands occurs mainly between the fourth and sixth decade of life, with a slight predominance in women [7]. It is also classified as the most common salivary gland neoplasm in children [8]. Clinically, they are characterized by being painless, well-defined and covered with a normal mucous membrane, with ulcerations being observed in some cases. Tumors of the major glands are usually encapsulated, unlike tumors of the minor glands [9]. As its name indicates, it has a mixed histology and consists of 3 components: epithelial, myoepithelial and stromal (mesenchymal). It is also known as a benign mixed tumor, which describes its pleomorphic appearance on light microscopy with an origin from epithelial and myoepithelial elements [10]. The therapeutic approach for this type of neoplasms in minor salivary glands is wide local excision with removal of the periosteum and the affected bone [9-12]. The potential risk of malignancy of Pleomorphic Adenoma is around 6% [13-16].

For this research, the patient's rights were fundamentally protected, under the consent signed by the patient and the authorization in the teaching area of the Hospital Interzonal General de Agudos Gral Perón, respecting the ethical principles based on the Declaration of Helsinki.

Clinical Situation

A 27-year-old female patient presented at the Dentistry service of the Presidente Perón General Acute Interzonal Hospital in Avellaneda. The patient's clinical history and anamnesis revealed a swelling in the hard palate on the right side, radiating to the soft palate, lasting 6 months. No systemic history reported (Figure 1).

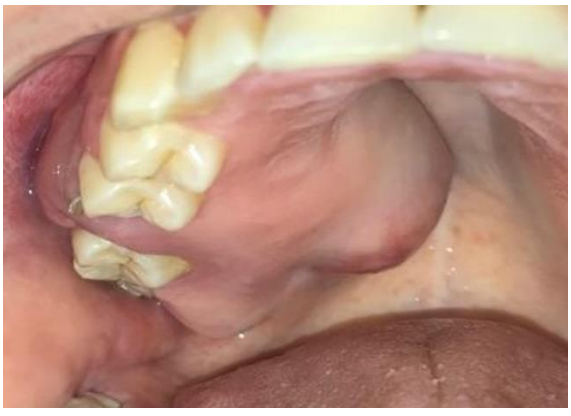


Figure 1: Preoperative photograph of the patient where you can see the swelling on the hard palate between teeth

1.5 to 1.7

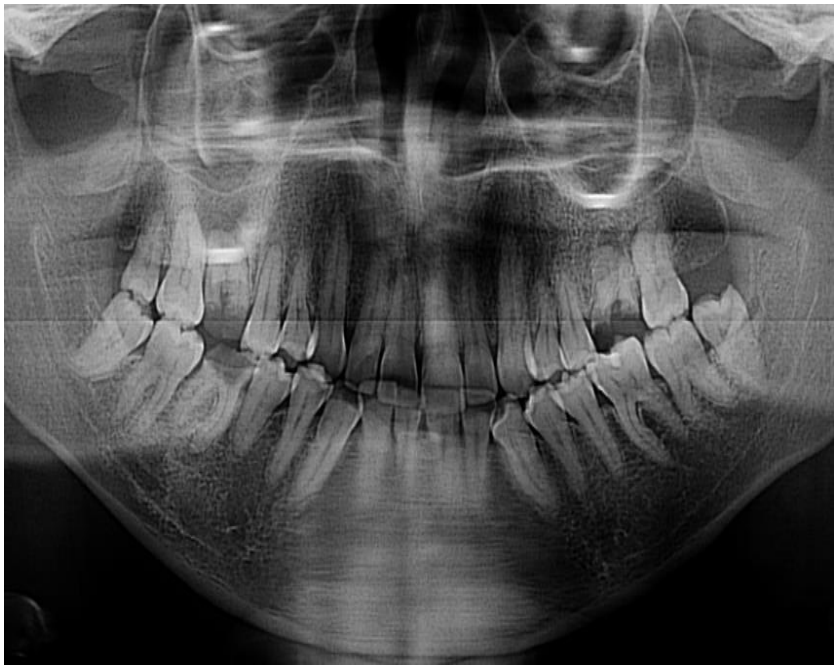


Figure 2: Panoramic radiography. In it you can see the root rest of tooth 1.6, in which the presumptive diagnosis was an infectious condition.

where penetrating caries was observed in tooth 1.6 and with a probing depth of 9 mm. Upon extraoral and intraoral clinical inspection, a 4x3cm tumor on the hard palate, of indurated consistency, immobile and painless on palpation, with slight invasion of the ipsilateral soft palate, was observed at the level of tooth 1.6 and 1.7, both with mobility, with normal coloring and defined edges. In the clinical cervicofacial examination, no clinical signs of lymphadenopathy were observed. Based on the clinical radiographic diagnosis, an infectious swelling due to tooth 16 was presumed to be present. For this reason, an aspiration puncture of the swelling was performed to confirm the presence of pus, the result being negative. Taking the clinical radiographic parameters, the extraction of teeth 16 and 17 was planned, and the approach to the exploratory tumor lesion.

Surgical procedure

Under preoperative antibiotic prophylaxis of Amoxicillin 875mg + Ac. Clavulanic acid 125 mg, extraction of teeth 1.6 and 1.7 and total excision of the tumor was carried out, under local anesthesia, Carticaine 4% - adrenaline 1:100,000. The surgical field was antisepsised with 10% povidone iodine, anesthesia of the posterior dental and posterior palatine nerves, and preparation of the surgical field. Intracrevicular incision with Bad-Parker No. 3 scalpel and No. 15 blade, to pieces 1.6 and 1.7; extractions themselves with a straight clevdent-type elevator and upper molar clamps; muco-periosteal curettage of palatine mucosa. At the time of clinical examination of the tumor, it is palpable that it is firmly adhered to the periosteal plane. The tissues continue to be disseminated until total enucleation is achieved. A hard, firm, encapsulated tumor approximately 1.5 cm in diameter can be observed (Figure 3,4).

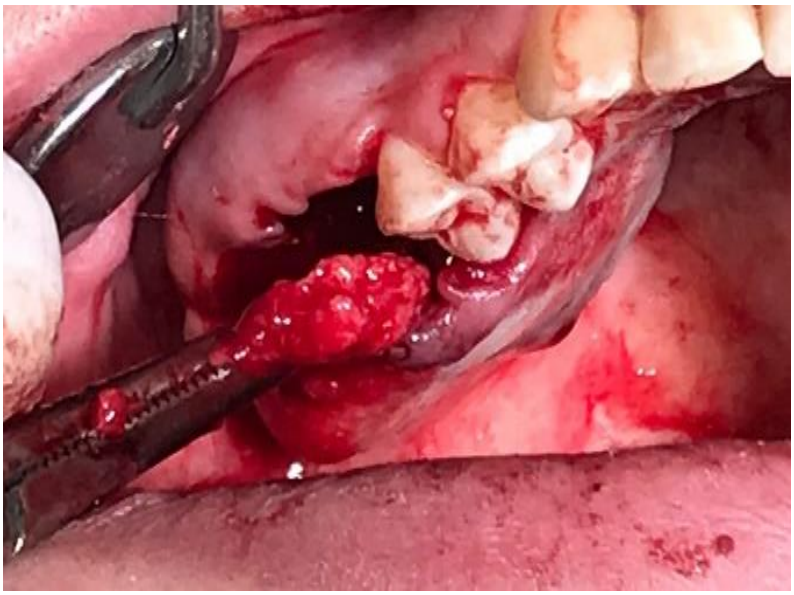


Figure 3: Removal of the pathological entity in the palate.

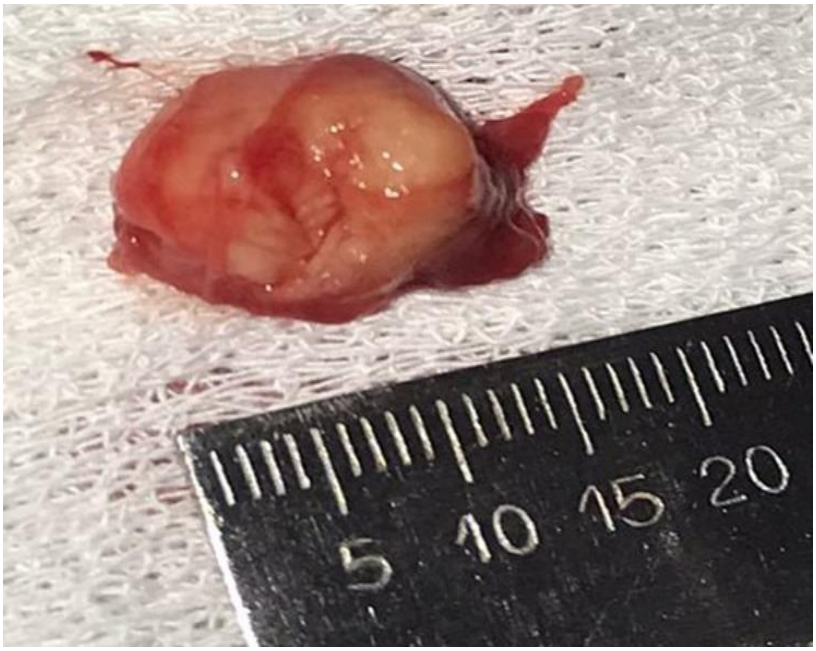


Figure 4: You can see the removed pathological mass measuring 15 mm in diameter, yellowish in color, capped and glandular in appearance.

Toilette the wound with sterile physiological solution, elongation and replacement of the vestibular and palatal curtain and syneresis with 3/0 nylon suture (Figure 5).

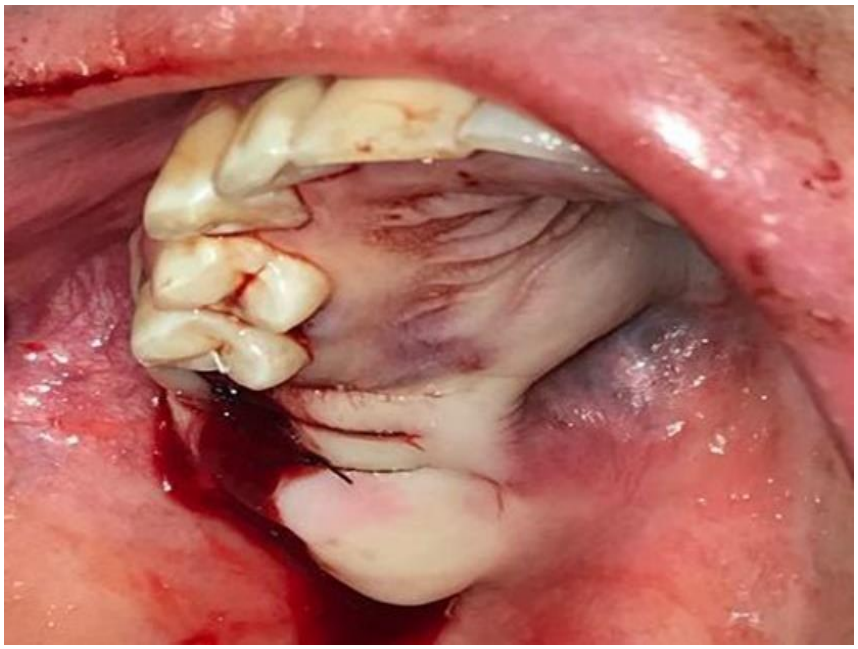


Figure 5: Synthesis of the surgery. Note the defect left by the pathological entity.

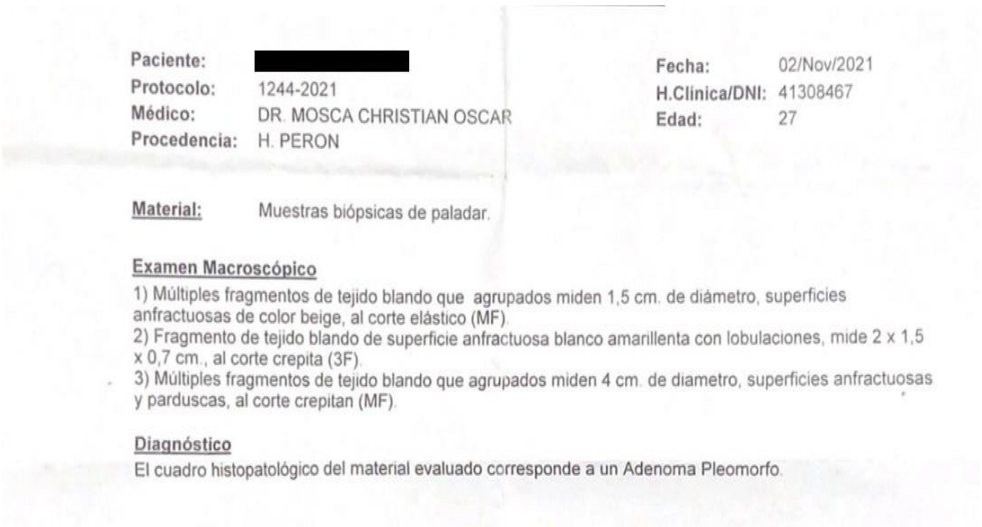
The pertinent post-surgical instructions were given to the patient orally and in writing. It was indicated to continue with antibiotic therapy indicated as prophylaxis with Amoxicillin 875 mg + Ac. Clavulanic 125 mg every 12 hours for 1 week, ibuprofen analgesic 600 mg and postoperative control in 24 hours. The sample was fixed in 10% formalin and sent to the pathological anatomy laboratory of the University of Buenos Aires, Faculty of Dentistry, along with its corresponding protocol.

Post-surgical controls

In the immediate and immediate post-surgical controls, favorable evolution of the surgical area was observed. The sutures were removed 10 days after the intervention.

Anatomopathological Result

Upon macroscopic examination, three biopsych samples were evaluated (Figure 6).



Paciente: [redacted]
Protocolo: 1244-2021
Médico: DR. MOSCA CHRISTIAN OSCAR
Procedencia: H. PERON

Fecha: 02/Nov/2021
H.Clinica/DNI: 41308467
Edad: 27

Material: Muestras biópsicas de paladar.

Examen Macroscópico

1) Múltiples fragmentos de tejido blando que agrupados miden 1,5 cm. de diámetro, superficies anfractuosas de color beige, al corte elástico (MF).
2) Fragmento de tejido blando de superficie anfractuosa blanco amarillenta con lobulaciones, mide 2 x 1,5 x 0,7 cm., al corte crepita (3F).
3) Múltiples fragmentos de tejido blando que agrupados miden 4 cm. de diametro, superficies anfractuosas y parduscas, al corte crepitan (MF).

Diagnóstico

El cuadro histopatológico del material evaluado corresponde a un Adenoma Pleomorfo.

Figure 6: Pathological anatomy report confirming the certain diagnosis of Pleomorphic Adenoma.

1. Multiple fragments of soft tissue that grouped together measure 1.5 cm in diameter, beige-colored anfractuous surfaces, elastic cut.
2. Fragments of soft tissue, with a yellowish-white surface with lobulations measuring 2x1.5 x 0.7, crackling when cut.
3. Multiple fragments of brownish soft tissue that together measure 4cm in diameter, anfractuated and brownish surfaces, and crackle when cut.
4. The histopathological diagnosis of the material evaluated corresponds to a pleomorphic adenoma of the minor salivary gland.

Discussion

Salivary neoplasms constitute about 3% of all tumors and are responsible for between 2 and 4% of head and neck cancers [17-22]. Minor salivary gland tumors are rare and account for 15-23% of all salivary gland neoplasms [1,23-26]. The presence of pleomorphic adenoma in minor salivary glands occurs mainly in the hard palate (as in our case), followed by the lip, buccal mucosa, floor of the mouth, tonsil, pharynx, retromolar area and nasal cavity. The average age of onset is between 40 and 60 years, our situation corresponds to a 27-year-old patient, based on scientific statistics it is a rare age, and with a certain predilection for the female sex [2,27-30]. The clinical features of the tumor are mostly solid in appearance, except for rare examples showing cystic degeneration or ulcerations [1,31].

They produce few symptoms, the most common thing is to diagnose them as an asymptomatic mass, slow growing, firm in consistency, mobile and not adhered to the skin or deep planes, covered by normal oral mucosa, which in the case of the palate can ulcerate due to to eating trauma [1, 32]. When they acquire a considerable size they can cause alterations in swallowing or phonation. The detection of tumors in the hard palate, referring to the degree of involvement of neighboring structures, is complex and it is not uncommon to observe the invasion of deep structures of the maxillary bone, maxillary sinus or sphenoid; In our case it was limited to the soft tissues [1, 33]. It is necessary to know the extent of bone destruction

and tumor infiltration in the palate to determine the treatment to follow.

The treatment of choice is complete excision of the tumor with margins of 2-3 millimeters of surrounding healthy tissue, which involves curettage or drilling of the periosteum of the bone underlying the lesion, due to the possible presence of tumor cells on the surface. bone [1, 34]. Reasons for recurrence include incomplete excision, cutting through the extracapsular projections thus leaving some of the tumor, or rupture of the capsule, inoculating tumor cells, which is what occurs when dissecting close to the capsule. Radiotherapy will be reserved for recurrences and inoperable cases. The possibility of malignant transformation (2-9%) has been described, generally to adenocarcinoma or ex-carcinoma pleomorphic adenoma, the risk increasing with the duration of the tumor and the average age of the patient. It is suggested to perform postoperative controls for up to 10 years [1, 30-35].

In the clinical situation presented, the margin was not performed as indicated in the literature, but curettage of the periosteum was. The reason for this is because surgically we did not know the diagnosis of the pathological entity removed. Having obtained the pathological report, it was decided to carry out follow-up procedures over 3 years, without the patient having a recurrence (Figure 7a and b).

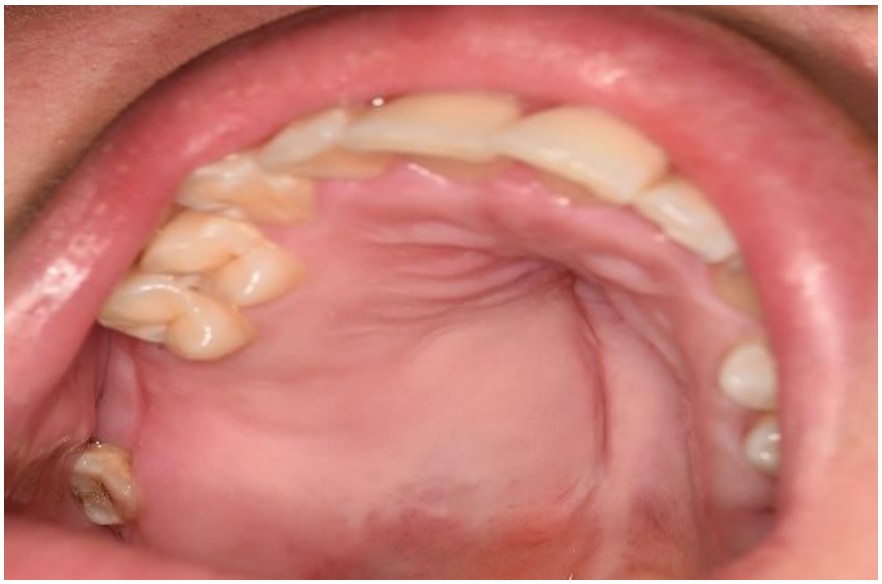


Figure 7a: Post-surgical control 3 years after the surgical intervention, where the non-recurrence of the pathological entity is observed.

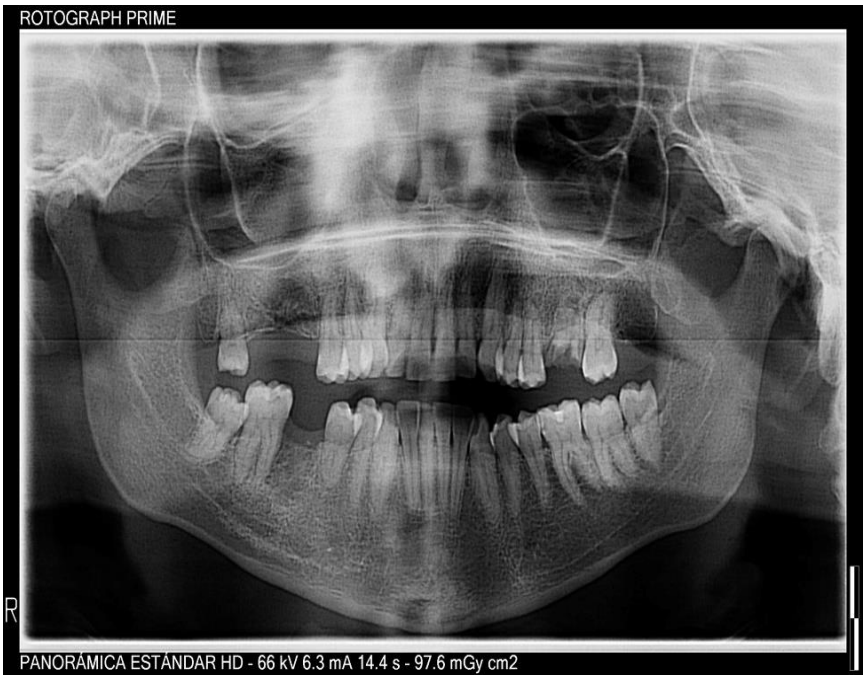


Figure 7b: Post-surgical control 3 years after the surgical intervention, where the non-recurrence of the pathological entity is observed.

Conclusion

The history and clinical appearance are essential for the diagnosis of pleomorphic adenoma. Although a biopsy with fine needle aspiration can be performed to have a prior histopathological study, cytology is not always certain. In our case, an infection was thought to be due to penetrating caries in tooth 1.6, so upon obtaining the definitive diagnosis of pleomorphic adenoma, the therapeutic attitude was taken to periodically monitor the patient in case it generated a disease from a distance recurrence. Let us always keep in mind that the treatment of choice for pleomorphic adenoma is a local excision with an adequate margin of surrounding healthy tissue due to the possibility of recurrence and degeneration into a malignant tumor; Its prognosis is favorable if surgical excision is adequate. But it is one of the few neoplasms that can undergo malignant transformation and it is important to monitor these patients, recommending it for 10 years.

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