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Case Report

Pleomorphic Adenoma of the Parotid: About Two Cases at the Maman Élisabeth Domitien University Hospital in Bimbo

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Abstract

The authors report aspects of the management of two cases of pleomorphic adenoma of the parotid, registered at the Department of Otorhinolaryngology and Head and Neck Surgery of the Centre Hospitalier Universitaire Maman Élisabeth Domitien de Bimbo in the Central African Republic. The objective of the study was to describe the epidemiological profile of patients with pleomorphic adenoma of the parotid, the anatomoclinical aspects and the early treatment outcomes.

They were two young men, students aged 22 and 26 respectively, with left parotid swelling and recurrent right parotid swelling.

In these patients, the disease had progressed for 7 months and 9 years, respectively. Physical examination revealed a mass in the parotid area each time. The ultrasound revealed an intraparotid mass, hypoechoic, with lobulated contours, the volume of which was 32.6 cc for the first patient and 50 cc for the second, both pleading in favor of a benign tumor. The patients underwent surgery. Surgical excision of the mass was complete with preservation of the facial nerve. The post-operative period was simple for both patients. Histology confirmed the diagnosis of pleomorphic adenoma.

Conclusion: Pleomorphic adenoma of the parotid gland is a benign tumor of the salivary glands. It is frequently observed in young males. The treatment is essentially surgical in our context and requires a wide excision with a margin of safety. The authors draw the attention of practitioners to the risk of recurrence in the event of incomplete excision.

Keywords: Pleomorphic Adenoma; Parotid; Surgical Excision; Facial Nerve; Central African Republic

Introduction

Parotid gland tumors are the most common salivary gland tumors. They are characterized by their great morpho-histological diversity, posing a diagnostic and therapeutic problem [1]. Pleomorphic adenoma is the most common benign tumor [2,3]. Parotid localization is predominant [4,5]. Classically, pleomorphic adenoma preferentially affects women, between 40 and 60 years of age [6]. It is a rounded, firm**,** slow-growing and painless tumor. Treatment of parotid gland tumors is primarily surgical [3]. If left untreated, the tumor can become giant and cause an aesthetic discomfort or even develop into a malignant tumor [7]. The difficulty in managing these conditions is linked to a high risk of recurrence [8]. Surgical treatment consists of the removal of the tumor and its entire capsule with a margin of healthy tissue. Hence the need to know the anatomical relationships of the gland in order to avoid facial nerve injury, which is the main postoperative complication. Based on two cases treated in our department, we propose to describe the epidemiological profile of patients with pleomorphic adenoma of the parotid, the anatomoclinical aspects and the early results of the treatment.

Observations

CASE 1

This is a 22-year-old patient, student, received in consultation at the ENT and Head and Head Surgery department of the Maman Elisabeth Domitien University Hospital in Bimbo on September 12, 2022, for a large left parotid mass (Figure 1) that has been evolving for seven months. On examination, the tumor is of firm consistency, well rounded, mobile in the deep planes, measuring about 6 cm in diameter with healthy skin facing each other. The patient does not have signs of peripheral facial paralysis or local inflammatory signs.

Figure 1: Left parotid swelling prior to excision.

Ultrasound examination (Figure 2) reveals a homogeneous, hypoechoic, left intraparotid mass of 32.6 cubic centimeters in volume with discretely lobulated contours.

Figure 2: Cervical ultrasound showing an intra-parotid hypoechoic image.

In January 2023, we perform a left conservative total parotidectomy under general anesthesia with orotracheal intubation. The post-operative period was simple and the patient was allowed to leave the hospital. Care is continued on an outpatient basis.

Figure 3 show the macroscopic aspects of the surgical specimen. Histological examination of the surgical specimen confirmed a potentially recurrent pleomorphic adenoma. After a follow-up of six months postoperatively, the patient was seen again at the follow-up and showed no signs of recurrence. Healing was well underway (Figure 4).

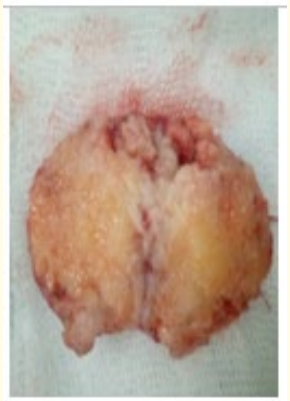


Figure 3: Macroscopic appearance of the operative specimen of the pleomorphic adenoma.

Figure 4: Follow-up after 6 months postoperatively.

Case 2

This is a 26-year-old patient, also a student, referred to the Sino-Central African Friendship University Hospital on August 09, 2023 for recurrent right parotid swelling. The onset of the symptomatology dates back to 2012 when the patient presented with this parotid mass. She was operated on in 2014. After 9 years, the lump reappeared, prompting a consultation at the general surgery department of the Sino-Central African Friendship University Hospital in Bangui. It was at the end that the patient was referred to us for treatment. Local examination reveals a firm mass, not very mobile compared to the deep planes, measuring about 7 cm in diameter. The skin facing each other had an old surgical scar. There was no evidence of peripheral facial paralysis (Figure 5).

Figure 5: Preoperative appearance of the right parotid mass.

The parotid ultrasound revealed a hypoechoic tissue lesion with a lobulated contours of 50 cubic centimeters, suggesting a pleomorphic adenoma of the right parotid according to the sonographer. The indication for a parotidectomy is placed and performed on August 25, 2023. The procedure consisted of a total parotidectomy. The facial nerve was preserved after careful dissection (Figure 6). The macroscopic aspect of the operative specimen was shown in Figures 7 and 8. The postoperative follow-up was simple and the discharge was authorized on postoperative day 3. The patient is monitored on an outpatient basis every 3 days and the dressing is discontinued on the 10th postoperative day. Histological examination of the surgical specimen revealed a pleomorphic salivary adenoma (Figure 9). Two months after the procedure, on physical examination, the patient showed good healing and there was no evidence of tumor recurrence. (Figure 10).

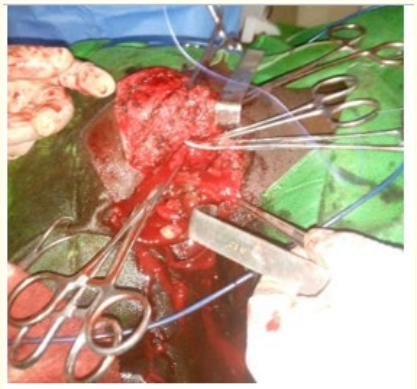
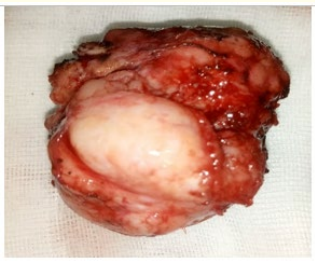


Figure 6: A view of the intraoperative control dissection.



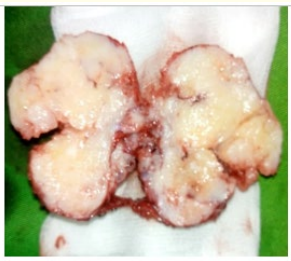


Figure 7 and 8: Macroscopic aspects of the multifocal pleomorphic adenoma.

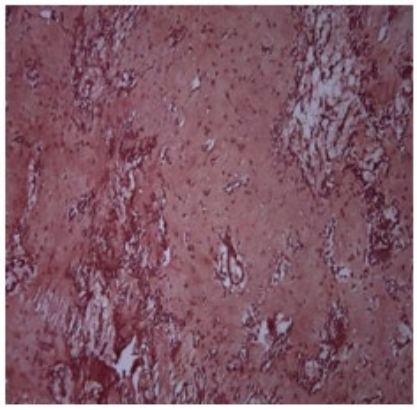


Figure 9: Pleomorphic adenoma in light microscopy (Hematoxillin eosin X100).

Figure 10: Local state at 2 months postoperatively.

Discussion

Tumors of the parotid gland are rare. They are dominated by the pleomorphic adenoma [9]. Pleomorphic adenoma of the parotid gland is capable of recurrence if microscopic tumor foci persist or if extracapsular tumor foci exist after partial excision [10]. This tumor was found to be more common in women than men between the ages of 40 and 60 [6,11]. The average age of patients for this type of tumor varies between studies. It is 40 years for Jardel., *et al*. [8], compared to the work of Brahim., *et al*. [4], who reported an average age of 44 years. In our study, patients were young male subjects with a mean age of 24 years. Our findings are in line with those of other authors [9,12], who reported a slight male predominance and a preponderance of young subjects.

The main telltale sign of this condition was swelling of the parotid region of varying consistency with healthy skin. In our study, patients had swelling of the parotid region with a previous scar from the surgical incision in front of the skin in the second patient. Clinically, the development of thyroid tumor is slow, which can reach a latency time of several years. In one study, the authors reported an average duration of evolution of five years [8]. The clinical course in our two patients was variable. It was seven months for the first patient and 11 years for the second.

It is generally accepted that the size of the tumor is less than 4cm [10,13]. But in our study, the tumor size ranged from 6 to 7 cm as reported by some authors [14-16]. Ultrasound is a morphological examination that often contributes to the diagnosis. However, its implementation is not too decisive because it only gives diagnostic guidelines by objectifying the tumor and assessing its spread [17]. For the patients in our study, the ultrasound appearance is in the form of an intraparotid mass, hypoechoic, with lobulated contours, with a volume varying between 32.6 and 50 cubic centimeters.

The diagnosis of pleomorphic adenoma of the parotid gland can only be confirmed by histological examination of the operative specimen. Generally, the histological appearance associates an «epithelial-myoepithelial» cellular component with ductal epithelial structures, layers of spindle or plasmacytoid myoepithelial cells, and a conjunctival component (or stroma), consisting of fibroblastic areas, myxoid zones, and chondroid zones in varying proportions [10,18].

As for our patients, the microscopy of the tumor had revealed a fasciculated architecture made up of spindle-shaped cells of plasmacytoid appearance with phenomena of the zones, sometimes myxid, sometimes cribiform in appearance without any sign of malignancy. According to data from the literature [10-20], myxoid and hypocellular subtypes are associated with a higher risk of recurrence. Jardel., *et al*. [8] found histological types related to tumor recurrences, including the myxoid stroma due to its fluid texture, satellite nodules, variations in capsule thickness and penetration. According to Paris., *et al*. [21], hypocellular pleomorphic adenomas are more likely to have a thin capsule, thus constituting the histological subtype most frequently encountered in recurrences. This finding could justify the occurrence of a recurrence in our second patient after a follow-up of 9 years.

Surgical en bloc excision with histologically clear resection margins is the first-line treatment for pleomorphic adenoma of the parotid [8,22]. In our context, the surgical treatment consisted of a total parotidectomy by dissection under general anesthesia with facial nerve sparing. This surgical procedure carries certain risks, such as postoperative aesthetic or functional sequelae, which are more or less significant and more or less lasting [23]. No postoperative complications were observed in our patients. According to Jardel., *et al*. [8], first-time recidivism rates range from 0.5% to 5%. These can be late, sometimes they occur after 20 years. We found no complications or tumor recurrences after a follow-up of 6 months for the first patient and 2 months for the second case.

Conclusion

Pleomorphic adenoma of the parotid is frequently observed in young male subjects. The histological component is of the cellular type associated with phenomena of the zones, sometimes myxoid. Treatment remains surgical and requires complete removal of the tumor with a healthy resection margin. Rigorous monitoring of patients and extemporaneous examinations will guide the surgeon and prevent tumor recurrence.

Conflict of Interest

None.

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