Available online at www.scientiaresearchlibrary.com

Scientia Research Library

ISSN 2348-0416
USA CODEN: JASRHB

Journal of Applied Science And Research, 2020, 8 (1):18-23

(*http://www.scientiaresearchlibrary.com/arhcive.php*)

Management of recurrent parotid tumors

Abdelfattah ALJALIL*, Amine ENNOUALI, Younes CHABRAOUI, Mohamed ELAKHIRI, Youssef DAROUASSI, Haddou AMMAR

Service d'ORL – CCF, Hôpital Militaire Avicenne ,Marrakech, Maroc

ABSTRACT

Any tumor of the parotid that was insufficiently treated initially may recur, requiring specific surgical management. The objective of our study is to report our experience in the management of recurrences of parotid tumors, by studying the different diagnostic elements as well as the different stages of therapeutic management. For this we conducted a retrospective study, concerning 18 cases of recurrence of parotid tumors within the department of ENT - CCF of the Avicenne Military Hospital of Marrakech (Morocco) between January 2010 and December 2017. The different diagnostic and therapeutic modalities have been discussed with the data reported in the literature.

Keywords : parotidectomy, recurrence, revision surgery

INTRODUCTION

Parotid tumors represent around 3% of head and neck tumors and 0.6% of human tumors [1]. They are dominated by benign pathology (80%) with the pleomorphic adenoma as the lead [2]. Any tumor of the parotid that was insufficiently treated initially may recur, requiring specific surgical management. These recurrences mainly concern pleomorphic adenomas, given their frequencies and the controversies surrounding their surgical indications which are sometimes the cause of therapeutic insufficiency [3].

Surgical recovery is the standard treatment. However, this approach remains technically difficult and can lead to disabling complications [4,5]. The objective of our study is to report our experience in the management of recurrences of parotid tumors.

MATERIALS AND METHOD

Our work is a retrospective study, spread over an 8-year period from January 1, 2010 to December 31, 2017, conducted within the otolaryngology and head and neck surgery department of the Avicenna Military Hospital of Marrakech. We included in this study all patients with a recurrence of a parotid tumor, who subsequently benefited from a histological examination of the operating room (lumpectomy or superficial or total parotidectomy room). Files without the operating report of the initial surgery or without the pathological examination of the operating room were excluded, making it possible to identify a population of 18 patients. Clinical and paraclinical data were collected from hospital records and were noted on an operating record.

RESULTS AND DISCUSSION

The incidence of parotid tumor recurrences was 2 cases per year. The age of our patients varied between 28 and 73 years with an average of 49 years. 61.7% of patients were female and 38.9% were male. Table I summarizes the various antecedents found in our patients. The mean time to recurrence was 76.2 months with extremes ranging from 9 months to 18 years for pleomorphic adenomas and 35.5 months with extremes ranging from 4 months to 11 years for malignant tumors.

Table I: summary of the antecedents found in the population

	Background	n=	%
Medical	Diabetes	5	27,7
	High blood pressure	3	16,6
	Parotitis	3	16,6
Surgical	Parotid surgery	18	100
	Cholecystectomy	4	22,2
	Appendectomy	1	5,5
Toxic	Smoking	5	27,7

The progressive reappearance of a swelling of the parotid region was the main symptom in all our patients, associated with pain in 7 cases (38.8%) and with peripheral facial paralysis in 3 cases (16.6%). found a mass of the parotid region whose size, consistency and mobility were variable, associated with skin invasion in 3 patients (16.6%) and satellite lymphadenopathy in 5 patients (27.7%) (Table II).

Table II: summary of physical examination data

Local review	Mass parotidienne	Location	Right	38,3%
			Left	61,7%
		Cut	<2 cm	22%
			2-4 cm	44%
			4-6 cm	28%
			> 6 cm	6%
		Consistency	Soft	22,4%
			Closed	38,3%
			Tough	38,3%
		Mobility	Mobile	55,6%
			Fixed	44,4%
Locoregional examination	Skin invasion			16,6%
	Satellite lymphadenopathies			27,7%
	Free Sten Canal			100%
	Normal examination of other salivary glands			100%
General examination	Normal			100%

The parotid ultrasound, performed in all our patients, showed a hypoechoic aspect with clear limits and regular contours of the parotid tumor in 11 cases (61.1%), fuzzy limits and irregular contours in 7 cases (38.9%) and cervical lymphadenopathy in 5 cases (27.7%). The cervical computed tomography centered on the parotid region was performed in 11 patients (61.9%) and showed a tumor dependent on the superficial lobe in 7 patients (38.8%). She mentioned a malignant origin in 4 patients (22.2%) due to the heterogeneous appearance of the tumor, its irregular borders or its massive enhancement after the injection of the contrast product. Associated cervical

lymphadenopathy was found in 5 patients (27.7%). Magnetic resonance imaging (Figure 1), performed in 7 patients (38.8%), objectified a tumor of very limited aspect, encapsulated with a hyposignal aspect T1 and T2 hypersignal and enhancement at the periphery after gadolinium injection in 3 patients (16.6%). It revealed a tumor mass with irregular contours in T2 hyposignal with heterogeneous enhancement after injection of gadolinium in 4 patients (22.2%). Associated lymphadenopathy was found in 2 cases (11.1%). Fine needle aspiration cytology was not performed in our patients.

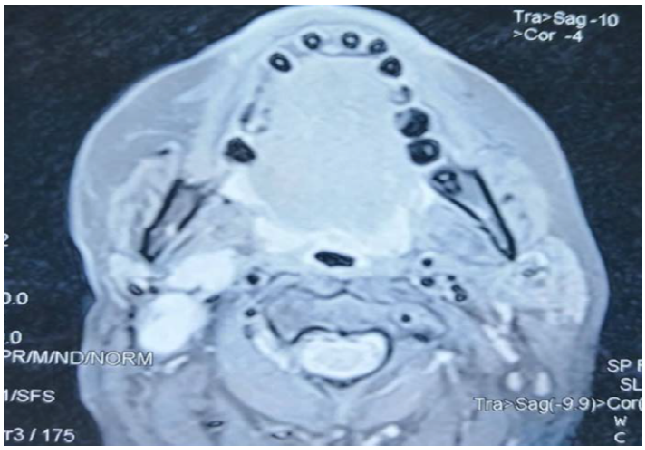

Figure 1: MRI of the parotid region in axial section, showing the presence of two contiguous masses of the right parotid associated with suspected bilateral lymphadenopathy

An anatomopathological examination of the operating room found a pleomorphic adenoma in 11 cases (61.1%), an acinar cell carcinoma in 4 cases (22.2%), an adenoid cystic carcinoma in 2 cases (11.1%) and ductal carcinoma salivary in 1 case (5.5%). All these histological results were consistent with those of old tumors, there was no case of degeneration of pleomorphic adenomas.

An extension assessment was requested before malignant tumors and consisted of a thoraco-abdomino-pelvic CT scan, thus making it possible to classify them according to the TNM classification:

• 4 cases of acinar cell carcinomas classified respectively: T1N1M0, T1N2aM0, T2N0M0, T3N0M0.

• 2 cases of classified adenoid cystic carcinomas: T2N2bM0, T2N1M0.

• a case of salivary duct carcinoma classified T2N2aM0.

Surgery was performed in all of our patients, the modalities of which were dictated by clinical and paraclinical data. We performed a lumpectomy in 3 patients (16.7%), an exo-facial parotidectomy in 8 patients (44.5%) and a total parotidectomy in 7 patients (38.8%). The associated surgical procedures consisted in an exeresis of the facing skin in 3 cases (16.6%), a sacrifice of the facial nerve in 3 cases (16.6%) and a triangular lymph node dissection (zone I, II, and III) homolateral to the tumor in 5 cases (27.7%).

All the files of patients presenting with a recurrence of malignant tumors were presented during multidisciplinary concertation meetings. Radiation therapy was performed in 7 patients (38.9%) with an average delay compared to surgery of 8 weeks. The average dose was 54 Gy with standard spreading and fractionation: 2 Gy / d; 5 d / week. This irradiation involved the parotid region in all cases, associated with irradiation of the lymph nodes in 5 cases. None of our patients have had

chemotherapy.

The postoperative operations were marked by 3 cases (16.6%) of definitive facial paralysis, 3 cases (16.6%) of paresis of the mental branch, 2 cases (11.1%) of hematoma and one case (5.5%) of infection of the wound. After a 3-year follow-up, 6 of our patients (33.3%) were lost to follow-up and were not among the assessable patients. Of the remaining 12 patients, only one recurrence was noted, this was the case of a man with adenoid cystic carcinoma in whom radiotherapy was indicated and who died 2 months later. Only one patient presented with Frey syndrome. A good development was noted in the rest of the cases.

Discussion

Parotid tumors are benign in 80% of cases and the most frequent histological type is pleomorphic adenoma which represents 50 to 60% of benign parotid tumors [2,6,7,8]. Its recurrence rate varies depending on the initial surgical management, reaching 20 to 45% in the case of enucleation, 1 to 4% in the case of superficial parotidectomy and 0 to 4% in the case of total parotidectomy [9]. Malignant tumors for their part represent 15 to 25% of parotid tumors, with a recurrence rate of up to 15 to 50% during the first 5 years after initial management [10,11].

Sex is a controversial prognostic factor. For some, men have a poorer prognosis [3,11,13]. but for others, sex has no influence on the prognosis [14,15,16]. Young age seems to predict a good prognosis [11]. Joseph [17], reports a survival of 75% at 5 years in subjects under 60 years of age versus 55% for older subjects.

For malignant tumors, the TNM stage is a crucial prognostic element [3,11,12]. A study of 166 patients who had been treated by radio-surgical combination found a significantly higher 10-year survival rate in patients with no extra-glandular extension [13]. Lymph node metastasis is a negative prognostic factor on the regional and survival control. There is a strong correlation between the presence of a lymph node invasion and the occurrence of distant metastases, in particular in patients classified N3a [11]. For distant metastases, the survival of patients with parotid carcinoma is closely linked to occurrence of distant metastases. Among patients who die from their disease, 63.6% presented with distant metastasis, which suggests that remote control is an important issue on which the diagnosis depends [3,11].

Damage to the facial nerve is an extremely important prognostic factor both in terms of new recurrences and survival [3,11,13]. For Calearo [15], in case of clinical damage to the facial nerve, the rate of new recurrences is increased and survival is significantly reduced.

The influence of grade and histological type in terms of prognosis seems to be unanimous [3,11,18]. Several authors agree that there is a correlation between the histological type and the tumor evolution: Magnano [19] finds a 5-year survival rate of 52% for low grade tumors against 42% for tumors high grade. Surgical limits are a prognostic factor for new local recurrences [3,13] with also a prognostic value in terms of survival [15,16]. The presence of vascular emboli and / or peri-nervous sheaths has been identified as a prognostic factor in terms of long-term survival and recurrence [11,18]. Finally, it should be noted that biological factors are being studied (expression of p53, and HER-2) but are not used in usual clinical practice [11,14,18,20].

CONCLUSION

Recurrences of parotid tumors are relatively rare, and are a complex problem, especially from a therapeutic point of view. Several factors predispose to the recurrence of parotid tumors, namely: young age, histological type, quality and type of surgical procedure proposed for the initial tumor.

Their resumption of surgery is very demanding, exposing it to formidable complications, notably a definitive facial paralysis with all its functional, psychological and social repercussions. The lack of consensus further complicates the management of this type of tumor recurrence. The best treatment is the prevention of these recurrences, which requires a good mastery of the initial surgical procedure.

REFERENCE

[1] Day TA, Deveikis J, Gillespie MB, Joe JK, Ogretmen B, Osguthorpe JD, Reed SG, Richardson MS, Rossi M, Saini R, Sharma AK, Stuart RK. Salivary gland neoplasms. CurrTreat Options Oncol. févr **2004**;5(1):11‑26.

[2] Kümüş Ö, İkiz AÖ, Sarıoğlu S, Erdağ TK. Recurrent Parotid Pleomorphic Adenomas: Our Clinical Experience. Turk Arch Otorhinolaryngol. sept **2016**;54(3):112‑7.

[3] Gehanno. P, Guerrier. B, Plessey. JJ, Zanaret. M. Gehanno. P, Guerrier. B, Plessey. JJ, Zanaret. M. Les tumeurs de la parotide. Monographie du CCA Group; **2003** ; 95(6) : 395-410.

[4] Nøhr A, Andreasen S, Therkildsen MH, Homøe P. Stationary facial nerve paresis after surgery for recurrent parotid pleomorphic adenoma: a follow-up study of 219 cases in Denmark in the period 1985–2012. Eur Arch Otorhinolaryngol. oct **2016**;273(10):3313‑9.

[5] Ghosh S, Panarese A, Bull PD, Lee JA. Marginally excised parotid pleomorphic salivary adenomas: risk factors for recurrence and management. A 12.5-year mean follow-up study of histologically marginal excisions. ClinOtolaryngol Allied Sci. 1 juin **2003**;28(3):262‑6.

[6] Makeieff M, Venail F, Cartier C, Garrel R, Crampette L, Guerrier B. Continuous Facial Nerve Monitoring during Pleomorphic Adenoma Recurrence Surgery: The Laryngoscope. juill **2005**;115(7):1310‑4.

[7] Liu H, Wen W, Huang H, Liang Y, Tan X, Liu S, Liu C, Hu M. Recurrent Pleomorphic Adenoma of the Parotid Gland: Intraoperative Facial Nerve Monitoring during Parotidectomy. Otolaryngol Neck Surg. 1 juill **2014**;151(1):87‑91.

[8] Quer M, Guntinas-Lichius O, Marchal F, Vander Poorten V, Chevalier D, León X, Eisele D, Dulguerov P. Classification of parotidectomies: a proposal of the European Salivary Gland Society. Eur Arch Otorhinolaryngol. 1 oct **2016**;273(10):3307‑12.

[9] Witt RL, Eisele DW, Morton RP, Nicolai P, Poorten VV, Zbären P. Etiology and management of recurrent parotid pleomorphic adenoma. The Laryngoscope. 1 avr **2015**;125(4):888‑93.

[10] Nisa L, Borner U, Dür C, Arnold A, Giger R. Recurrent parotid gland carcinoma: how effective is salvage surgery? Eur Arch Otorhinolaryngol. 1 févr **2018**;275(2):507‑13.

[11] M. Boyd Gillespie, MD, MSc1,3,*, W. Greer Albergotti, BS1, David W. Eisele, MD2. Recurrent Salivary Gland Cancer. Pulished online: 4 January **2012** * Springer Science+Business Media, LLC 2011.

[12] M. Durbec. Recommandations de la SFORL, bilan d'extension et principes d'exérèse des tumeurs de la face et du cou. Annales françaises d'oto-rhino-laryngologie et de pathologie cervico-faciale 131 (**2014**) 360 369.

[13] I. Essaidi , C. Nasr , I. Aouni , Y. Ben Mrad , L. Kochbati , W. Ben Ayoub, , M. Maalej , I. Essaidi. Étude rétrospective de 42 cas de cancer primitif de la parotide, Tunis, Tunisie. Abstracts / Cancer/Radiothérapie 15 (**2011**) 573 640.

[14] H. Bourezgui, Z. Bourhaleb, A. Mazouzi, N. Benchakroun, H. Jouhadi, N., Tawfiq, A. Acharki, S. Sahraoui, A. Benider. Les cancers de la parotide (à propos de 70 cas) centre d'oncologie Ibn - Rochd, Casablanca, Maroc **1992** a 2003; 31 : 44-57.

[15] Jeannon JP, Calman F Gleeson M, McGurk, Morgan P, O'ConnellM,et al. Management of advanced parotid cancer. A systematic review. *Eur J Surg Oncol* **2008** ;28:130 3.

[16] Calearo VL, Hart AA, van der Laan BF, Baatenburg de Jong RJ,, JJ, Marres HA, et al. Prognostic index for patients with parotid carcinoma: external validation using the nation wide 1985 1994 Dutch Head and Neck Oncology Cooperative Group database. Cancer **2003**; 97:1453 63.

[17] Hocwald E, Korkmaz H, Yoo GH, Adsay V, Shibuya TY, Abrams J, et al. Prognostic factors in major salivary gland cancer. Laryngoscope **2001**;111:1434 9.

[18] JOSEPH R, Luna MA, Lee SS, Ang KK, Byers RM, Guillamondegui OM, et al. Prognostic variables in parotid gland cancer. Arch Otolaryngol Head Neck Surg **1991**;117:1251 6.

[19] Emmanuelle Uro-Coste, C.A. Righini. Tumeurs des glandes salivaires. État des lieux en 2009. Service d'anatomie pathologique et histologie-cytologie, hôpital de Rangueil. **2009** :60(3):313 6.

[20] Magnano S, Gay H, Rosenbaum P, Klish D, Bogart J, Sagerman R, et al. Malignant parotid tumors: presentation, clinical/pathologicprognosticfactors, and treatmentoutcomes. *Int J Radiat Oncol Biol Phys* **2005**;61: 112 8.

[21] A., Bouyona et al. Postoperative treatment of malignant tumors of the parotid gland: radiotherapy, concomitant chemotherapy and radiation therapy? Cancer/Radiothérapie 11 (**2007**) 465 475.