Journal of Oral and Maxillofacial Surgery, Medicine, and Pathology xxx (2017) xxx–xxx

Contents lists available at ScienceDirect

Journal of Oral and Maxillofacial Surgery, Medicine, and Pathology

journal homepage: www.elsevier.com/locate/jomsmp

Original research

Assessment of the extracapsular dissection of the benign parotid tumors, extending the literature

Safaa Riyadh [a], Saif Saadedeen Abdulrazaq [b,*]

[a] Medical City, Ghazi Al Hariri Tertiary Referral Hospital, Baghdad, Iraq
[b] College of Dentistry, University of Baghdad, Iraq

ARTICLE INFO

Article history:
Received 17 February 2017
Received in revised form 21 August 2017
Accepted 5 September 2017
Available online xxx

Keywords:
Parotid gland surgery
Extracapsular dissection
Pleomorphic adenoma
Benign tumor of the parotid gland
Superficial parotidectomy

ABSTRACT

Objective: To remove a superficial benign tumor of the parotid, the surgeon has two options; superficial parotidectomy, with well-known morbidity and practiced for decades, and extracapsular dissection with less surgical evidence. The aim of the study was to evaluate the extracapsular dissection technique and extending the present literature.
Methods: Sixteen cases were selected according to certain criteria and monitored for complications.
Results: One complication encountered with no long-term morbidity.
Conclusions: Extracapsular dissection is a safe, reliable and recommended technique to manage the small benign superficial parotid tumors if the case is selected properly.

1. Introduction

As all advances in surgical procedures seeking the less aggressive methods to reach their goals, extracapsular dissection (ECD) of the benign parotid tumors, although it has its limitations, considered to be minimally invasive surgery in comparison to the superficial parotidectomy (SP) [1].

The recurrence rate was almost identical between the two techniques, but the reduced morbidity favored the ECD over the SP in wisely selected cases [2].

In this technique, the skin flap is raised and retracted, the parotid fascia is incised along with the dissection of the normal parotid tissue away from the tumor without searching for the facial nerve; to avoid its damage [3]. After mobilization and removal of the tumor, the traditional closure by layers is followed.

The patient selection for ECD is highly demanding, not for the high-grade tumors which are diagnosed easily but for small size low-grade malignancy; at an early stage of malignancy almost all the clinical features are the same between benign and malignant neoplasms [3]. Fine needle aspiration (FNA) is a subject of debate between authors; some authors recommend its use [4] and others find it inessential because of the false-negative diagnosis of malignancy seen on FNA [5]. The ultrasonography is the recommended modality for diagnosis and follow-up, followed by magnetic resonance imaging (MRI) and computerized tomography (CT) [6–8].

The aim of the study was to assess the ECD and to lengthen the results of the literature from authors in the same field.

2. Methods

Sixteen consecutive patients undergone ECD with the following variable took into our consideration; size of the tumor, side whether right or left, sex, age, time of the operation and complications. All the cases share the following; same operator, same surgical approach which is modified Blair incision (Fig. 1), same closure technique, corrugated drain was used for all cases along with pressure dressing. All patients were discharged on the second postoperative day after removal of the corrugated drain.

2.1. Indications for extracapsular dissection

The decision to do ECD of the parotid tumors can be made clinically; superficial, small, mobile with well-defined tumor margin and with no clinical evidence of malignant involvement such as facial nerve paralysis. These clinical signs give the surgeon initial assessment of the benign nature of the tumor.

☆ AsianAOMS: Asian Association of Oral and Maxillofacial Surgeons; ASOMP: Asian Society of Oral and Maxillofacial Pathology; JSOP: Japanese Society of Oral Pathology; JSOMS: Japanese Society of Oral and Maxillofacial Surgeons; JSOM: Japanese Society of Oral Medicine; JAMI: Japanese Academy of Maxillofacial Implants.

* Corresponding author.
E-mail addresses: saifdento@gmail.com, drsaif.sa@codental.uobaghdad.edu.iq (S.S. Abdulrazaq).

http://dx.doi.org/10.1016/j.ajoms.2017.09.003
2212-5558/

Fig. 1. Modified Blair Incision (also known as a lazy S incision). Starts in front of the ear, underneath the earlobe and down into a cervical crease, used to get access to the left parotid area for ECD of a pleomorphic adenoma.

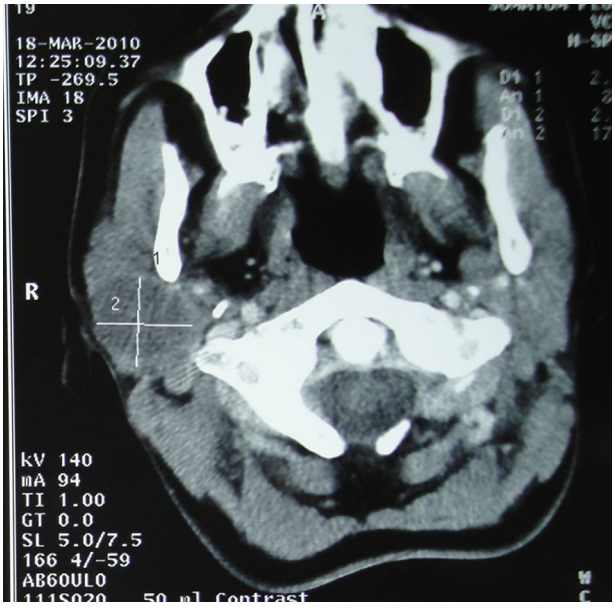

Fig. 2. Axial CT scan showing a right parotid gland pleomorphic adenoma with well circumscribed, well-defined margin.

2.2. Imaging

Three features must be considered during imaging; nature, location and extent of the tumor. The first line imaging technique, cheapest, quickest and usually the only required modality to confirm the benign nature of the tumor and define these three features is the ultrasound. While MRI and/or CT is used if there is any doubt of the diagnosis such as a large tumor; MRI to exclude the deep lobe involvement or CT to exclude bony involvement, giving the three-dimensional structure of the tumor and its relationship to the surrounding structures.

2.3. Selection criteria

Only benign parotid tumor located unilaterally in the superficial part of the parotid was selected for the ECD. In this study, we discriminated benign from malignant tumors by history, clinical examination, FNA, ultrasound, MRI and/or CT (Fig. 2).

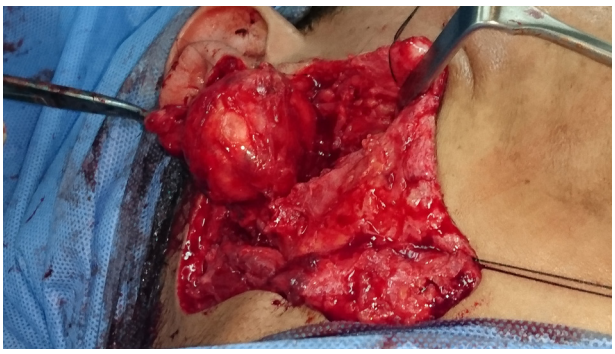

Fig. 3. ECD of the right parotid pleomorphic adenoma. The tumor is freely mobile before excision.

2.4. Exclusion criteria

Tumors in the deep lobe, large (>5 cm) tumors in the superficial lobe and tumors with suspected malignancy as indicated clinically, by FNA, MRI and/or CT (central necrosis, irregular margins, infiltration of adjacent structures and the existence of any questionable cervical lymphadenopathy) were excluded.

2.5. Surgery

Intraoperatively, the time of the operation starts with the induction of general anesthesia. The skin is marked (Fig. 1), the flap is raised, fascia is excised and the tumor is freely mobilized and excised (Fig. 3). Complications were observed intraoperatively, postoperatively and during follow-up periods.

2.6. Follow-up

After discharge from the hospital, the patients returned after one week for suture removal, with a weekly appointment for the first month, every two weeks for the second month, once monthly for the first year and as required after that. During the follow-up periods, a looking for any complication or signs of recurrence was made clinically, by ultrasound, MRI and/or CT scan.

2.7. Statistical analysis

Statistical analysis was made with the Statistical Package for Social Sciences (SPSS); (version 20.0; Armonk, New York, 2011) [9]. We tested the relationship between females and males in relation to the complications, the size of the tumor, time of operation and the age of the patients using the Fisher exact test. We tested also the relationship between ECD and SP in relation to the type of complication, using Pearson Qui-Square test. The relationship considered significant if probability (P) value < 0.05.

3. Results

Sixteen patients (ten females and six males) were enrolled in this study. All cases had been carefully selected for ECD.

The mean age of the patients at the time of surgery was 44.8 year (the age range was 25–60).

The mean time of the operations was 2.2 h (the time range was 2–3). The mean size of the tumors was 2.9 cm (the size range was 1–5). The sides of the tumors were 9 on the left and 7 on the right. The mean follow-up time was 93 months. Out of sixteen patients, there was one capsular rupture (6.3%) in a female patient (Table 1).

All the histological examination reports of the excised tumors revealed a straightforward preoperative provisional diagnosis of pleomorphic adenoma.

Please cite this article in press as: Riyadh S, Abdulrazaq SS. Assessment of the extracapsular dissection of the benign parotid tumors, extending the literature. J Oral Maxillofac Surg Med Pathol (2017), http://dx.doi.org/10.1016/j.ajoms.2017.09.003