

Extra-capsular Parotid Tumor Dissection

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Abstract

Parotid tumors are one of the common conditions in surgical practice and gold standard procedure for benign tumors of parotid being superficial parotidectomy but with risk of complications like facial nerve injury, whereas, in extra-capsular dissection of parotid, surgeon performs a careful dissection of the tumor and spares the handling of facial nerve thereby minimizing chances of facial nerve injury. We present here a case of benign parotid tumor operated by extra-capsular dissection.

Keywords: Parotid gland, Extra-capsular dissection, Facial nerve palsy.

Introduction

Parotid gland neoplasm comprises 3% of all head and neck tumors, 80% of these are benign, 65% are Pleomorphic adenoma and the other 25% are Warthin's tumor. Evolution of parotid surgery begins with enucleation of tumor leaving the capsule in situ, with a high recurrence rate. Minimizing damage to the facial nerve is one of the primary objectives of parotid surgery and has encouraged the development of alternative surgical techniques, including limited superficial parotidectomy and extra-capsular dissection [1].

Enucleation was first described by Senn in 1895 as the surgical technique of choice; tumor removal was incomplete, as there was tissue left behind [2].

In 1940, Janes [3] published article on salivary gland tumor surgery by parotidectomy with dissection and preservation of the main trunk and branches of the

facial nerve. In this procedure, tumor along with the superficial lobe was removed. Even though the recurrence rate had decreased significantly, facial nerve damage was still a risk. Several changes to this technique have been published over the past 60 years, yet superficial parotidectomy is still regarded as the gold standard treatment for Pleomorphic Adenoma.

Anderson in 1975 described Extra-capsular dissection of parotid tumors in which, a very close and careful dissection of the tumor capsule was performed while preserving the nerve [4]. Modified Blair incision used for ECD, surgeon performs careful blunt dissection of tumor by way of cruciate incision over the tumor, the tumor is then removed along with its capsule with 2-3 mm rim of normal parotid parenchyma, but without identification of the facial nerve.

Case Report

76 years old lady presented to the outpatient department with swelling in the right parotid region since one year, gradually increasing in size, not associated with pain, patient is a known hypertensive since 6 years. General physical examination was unremarkable. Local examination 5x5cm swelling noted arising from right parotid gland, firm in consistency, mobile, oral cavity examination - normal, no cervical lymphadenopathy. Routine blood tests were normal, MRI neck (Fig 1) showed well encapsulated parotid swelling confined to superficial lobe, FNAC showed benign cystic

Manuscript received 24th June 2016
Reviewed: 4th July 2016
Author Corrected: 14th July 2016
Accepted for Publication 26th July 2016

lesion right parotid. Patient underwent Extra-capsular dissection (Fig 2-4) under General Anesthesia, intraoperative finding being well encapsulated tumor of size 5x5 cm, cystic consistency.

Post-operative period uneventful and histopathology being features are of Warthin's tumor. (Fig 5)

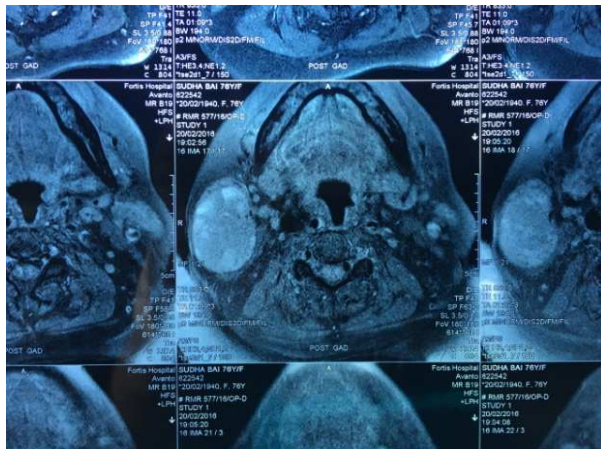


Fig-1: MRI showing well encapsulated parotid tumor



Fig-2: Modified Blair incision



Fig-3: Parotid tumor after raising flap



Fig-4: Tumor specimen

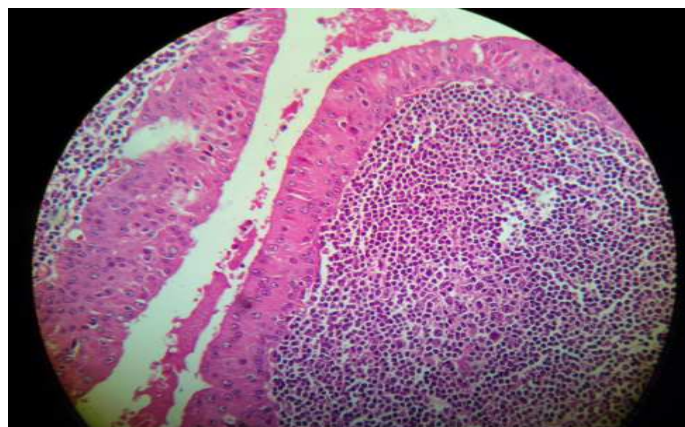


Fig-5: Histopathology Warthin's tumor

Discussion

Benign parotid tumor is one of the common condition and treatment being surgical removal. Three aspects are of importance in treating this condition, first - the

surgical technique, second-post operative complications and third - chances of recurrence of tumor. Surgical technique differs from parotidectomy where facial

nerve is identified and dissection done whereas in ECD facial nerve is not identified, only extra-capsular dissection done.

The rate of temporary postoperative paresis of the facial nerve is reported as 15% to 25% after superficial parotidectomy and 20% to 50% after total parotidectomy, whereas the rate of permanent facial nerve paresis is reported as 5% to 10% [5-9]. On the other hand, there is evidence in the literature to suggest that the risk of temporary or permanent facial nerve paresis is significantly less after extra-capsular dissection than after superficial or total parotidectomy [5-7]. The tumor for which ECD is ideally suited is the one that is well defined, mobile, approximately 4 cm in diameter, and lies in the superficial lobe of the parotid gland. Point against the technique is the chances of recurrence. Extra-capsular dissection and partial parotidectomy supposedly have a higher recurrence rate than the other techniques commonly postulated [5-7]. But recent studies showed the recurrence rate reported with extra-capsular dissection is similar to that reported with superficial and total parotidectomy, that is 0% to 5% [8-10]

Conclusion

We conclude that for a single, unilateral, tumor located in superficial lobe of parotid gland extra-capsular dissection as a surgical procedure of choice, can be implemented as an effective alternative to superficial parotidectomy with reduced operative time and low morbidity.

Funding: Nil, **Conflict of interest:** None initiated,

Permission from IRB: Yes

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How to cite this article?

Sathyakrishna B. R, Rajaput S. S. Extra-capsular Parotid Tumor Dissection. *Int J Med Res Rev* 2016;4(8):1307-1309.doi:10.17511/ijmrr.2016.i08.04.