

CASE REPORT

Parotid Gland Oncocytoma-A Case Report

Muhammad Amir¹, Sibgha Aimon², Sehrish Latif³, Fareeha Farooqui⁴, Memoona Zartash⁵, Humera Naz Altaaf⁶

ABSTRACT

Tumors of parotid glands are majority benign and commonest of them is Pleomorphic adenoma. Patients commonly presents with a painless swelling in face. Parotid Oncocytoma is a rare parotid tumor with incidence of 0.1-1.5% (rarest of salivary tumor type) of all parotid tumors, and it occurs in 6-8th decade of life. In this case report we will present a case of 75 years old male with painless swelling in parotid gland and diagnosis of Oncocytoma was made.

Key Words: *Benign Tumors, Oncocytoma, Parotid Gland.*

CASE

A 75-year-old male presented to us in surgical OPD of Shifa International Hospital on Dec 06, 2020, with complaints of swelling left angle of mandible and preauricular region. He noticed this swelling 2 months ago as a small pea size nodule and it progressively increased in size. Swelling was painless and there was no associated fever, dry mouth or pain while chewing. He did not notice any change in salivation. Patient had no co-morbid and no prior exposure to radiations. There was no past surgical history, and he wasn't on any routine medications. Upon examination patient was vitally stable. There was a swelling in left preauricular region extending till the angle of mandible and had size of ~2x2cm. Swelling was soft, nontender, mobile and non-fluctuant. Surface of swelling was smooth and had regular margins. Bimanual palpation was done which showed no attachment to muscles and mobile mass. No lymph nodes were palpable. Facial nerve was intact.

His laboratory workup was normal. Ultrasonography of swelling showed a well-defined lesion with macro lobular margins and hypo echoic appearance in left parotid gland which measured approximately 17.4*13. 5mm. Swelling showed mild internal

vascularity on Doppler Ultrasound. It was predominantly in superficial lobe with mild extensions into deep lobe, and possibility of Pleomorphic Adenoma was arisen.

We then proceeded for Fine Needle Aspiration Cytology (FNAC) which showed moderate cellular smear composed of cluster and sheets of oncocytic cells with bland central nuclei, no mitosis was seen. These features were favoring Oncocytic neoplasm. Patient was counselled in detail about surgery and possible complications, and he was admitted in the hospital for superficial parotidectomy. Nerve stimulator was used for the identification of facial nerve. We performed superficial parotidectomy and extension of tumor into deep lobe was also excised preserving facial nerve (shown in Figure 1). A drain was placed, and wound was closed. Postoperatively he had drooping of the angle of mandible, but there was no significant saliva leak. Patient was discharged on postoperative day 2. Currently he only has minimal droop which is not visible. His final histopathology report showed that superficial lobe had focal chronic inflammation and deep lobe was oncocytic neoplasm favoring oncocytoma was partially circumscribed, had monomorphic large polygonal cells, which had abundant eosinophilic granular cytoplasm, Nuclei were small, centrally placed, round to oval with prominent nucleoli, there was mild hyperchromasia but no nuclear atypia or pleomorphism and mitosis was present, Stroma was vascular. Immunohistochemistry showed p63 focal present CK5/6 was Patchy positive.

Introduction

Parotid gland is bilateral and one of the major salivary glands. Tumors of Salivary gland are uncommon and represent 1% of head and neck

^{1,2,3,4,6}Department of Surgery

Shifa College of Medicine

Shifa Temeer- e- Millat University, Islamabad

⁵Department of Radiology

Shifa International Hospital, Islamabad

Correspondence:

Dr. Sehrish Latif

Assistant professor Surgery

Shifa College of Medicine

Shifa Temeer- e- Millat University, Islamabad

E-mail: sehrish64@live.com

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Figure 1

tumors¹. Most common site of tumor in salivary gland is parotid gland which accounts for 85% of all. Out of this 85%, majority of it are benign and commonest benign tumor is Pleomorphic adenoma, whereas commonest malignant tumor is Mucoepidermoid¹. Rarely an entity is parotid oncocytoma, as it occurs in less than 1 percent of all salivary tumor types. Its clinical presentation is often misdiagnosed as pleomorphic adenoma or other types.²

Majority tumors of parotid glands are benign whereas tumors of minor salivary glands are predominantly malignant. Salivary gland tumors are slow growing and are well circumscribed. Lesion which are rapidly growing, have pain, paresthesia, and facial nerve weakness have increase potential of being malignant and needs further workup and are managed aggressively.²

Recent publications showed that multiphase contrast enhanced CT is potentially helpful, as few of the parotid tumors are invisible on CT scan resulting in reducing effectiveness of the scan.³ However, cytological analysis (FNAB) is excellent tool to exactly diagnose the oncocytoma as an entity.³

MRI is an improved study showing enough information of soft tissues, providing characterized parotid masses.⁴

In this case report we are presenting a case of 75 years old male with painless swelling of left parotid gland, which on workup was diagnosed with Oncocytoma, a rare benign parotid gland tumor.

Discussion

Parotid gland is the most common site of tumor in all salivary glands, and majority of tumors in parotid gland are benign. Most common benign tumor in parotid gland is pleomorphic adenoma, whereas most common malignant tumor is mucoepidermoid tumor.²

Oncocytoma is a rare benign parotid tumor with incidence of 0.5-1.5% in salivary gland⁵. Commonest location of oncocytoma is parotid, however they can be found in other areas including but not limiting to Sublingual gland, soft palate, and hard Palate⁵. The word Oncocyte is derived from Greek word “*onkousthai*” meaning Enlarge/Swollen and this was first recognized in 1897 by Schaffer who observed presence of eosinophilic cells in salivary glands, later Hamperl in 1931 fully characterized the term Oncocyte.¹²⁻¹³ Oncocytes are epithelial cells with abundant eosinophilic cytoplasm and mitochondria⁷, due to characteristic eosinophilic cytoplasm oncocytes are also called oxyphilic cells.¹¹ The term oncocytoma was first described by Jaffe in 1932 who called tumors of salivary glands with abundant oncocytes as Oncocytoma.^{9,11}

Incidence of oncocytoma is most common in 6-8th decade of life with relative female predisposition.⁸ In 2005 World Health Organization (WHO) classified Oncocytic neoplasm in three distinct types and these are Oncocytosis, Oncocytoma and Oncocytic Carcinoma. Oncocytosis has only Hyperplastic change and it present with generalized enlargement of salivary gland, Oncocytoma is a benign well-circumscribed and encapsulated lesion whereas Oncocytic carcinoma is Infiltrative with mitosis and pleomorphic cells.^{10,13}

Oncocytes are normally present in limited number in normal tissue like in thyroid, parotid, pancreas, with advancing age their number increases and transformation into tumor occur which is thought to be because of exhaustion of cell and mitochondrial hyperplasia, this leads to metaplastic transformation of normal cells.⁹

Presentation of oncocytoma is as a painless swelling. Risk factors are unknown although in 20% of cases,

prolonged radiation exposure is found to be the cause. MRI and CT are investigation of choice but diagnosis of oncocytoma is usually made by use of FNAC, with accurate diagnosis in 29% cases.⁷ Histopathological, Oncocytoma has low mitotic rate and less pleomorphism as compared to oncocytic carcinoma which has high rate of mitotic activity and pleomorphism.⁵

Management involves surgical excision of tumor with preservation of facial nerve, final histopathology confirms the diagnosis. Recurrence is reported in 20-30% of patients, so follow-up is advised with MRI after 1 and 2 years.¹²

Conclusion

Oncocytoma of parotid gland is a rare benign tumor, with limited reporting. Definitive treatment so far is with surgical excision. Though rare but proper imaging includes CT and MRI followed by FNAB would help in proper surgical approach. Its recurrence has been documented so follow-up is advised in all patients with MRI.

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CONFLICT OF INTEREST

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DATA SHARING STATEMENT

The data that support the findings of this study are available from the corresponding author upon request.

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