ORIGINAL RESEARCH PAPER
Volume-9 | Issue-2 | February-2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

PLEOMORPHIC ADENOMA: A CASE REPORT

Surgery

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ABSTRACT

background- World Health Organization (1972) defined PA as a well-defined tumor characterized by its pleomorphic or mixed appearance. There is intermixing of the clearly recognizable epithelial component with mucoid, myxoid and chondroid component. Surgical management of pleomorphic adenoma 50 years ago consisted predominantly of local excision or "enucleation technique", a procedure that yields recurrence rates from 20% to 45%. The replacement of simple enucleation of tumor with other surgical approaches like: superficial parotidectomy (SP), total parotidectomy (TP), and extracapsular dissection (ECD) as treatment of choice reduced dramatically the incidence of tumor's recurrence and complications.

Material and method- This case report considers a 24 year female with a chief complaint of swelling in left side face since one and half years to two years. After clinical and radiological examination, provisional diagnosis of benign tumor of the left parotid gland was made. Excision of the superior lobe of the left parotid gland along with the tumor mass was made.

Conclusion- Enucleation, enucleoresection and superficial or total parotidectomy with preservation of the facial nerve are the main treatment modalities of pleomorphic adenomas. The replacement of simple enucleation of tumor with other surgical approaches like: superficial parotidectomy (SP), total parotidectomy (TP), and extracapsular dissection (ECD) as treatment of choice reduced the incidence of tumor's recurrence and complications.

KEYWORDS

INTRODUCTION:

Parotid gland tumors represent 2-3% of head and neck tumors and 0.6% of all tumors in the body. The highest incidence is in the fourth to sixth decades. In old age it occurs more frequently in males than in females patients.[1,2] These tumors are most often diagnosed and treated when the tumor is small (<4 cm) mobile and located in superficial lobe.[3,4,5]

Surgical management of pleomorphic adenoma 50 years ago consisted predominantly of local excision or "enucleation technique", a procedure that yields recurrence rates from 20% to 45%. Nevertheless, some complications can occur during surgical procedure. The main complication is temporary/ permanent facial nerve paralysis that compromises quality of life. Another relatively frequent complication is Frey syndrome/gustatory sweating. A further unwanted complication of surgical approaches in recurrent tumors is parotid cancer development. The replacement of simple enucleation of tumor with other surgical approaches like: superficial parotidectomy (SP), total parotidectomy (TP), and extracapsular dissection (ECD) as treatment of choice reduced dramatically the incidence of tumor's recurrence and complications.

CASE REPORT:

A 24 year female reported to the department of OMFS ITS MURADNAGAR with a chief complaint of swelling in left side face since one and half years to two years. The swelling was initially small in size and had progressively increased with time to attain the present size. Past medical and surgical history was noncontributory. On extra-oral examination a solitary well defined firm swelling extending antero-posteriorly from 1 cm ahead of left ear lobe till 3 cm posteriorly and supero- inferiorly from left mastoid aspect till the angle of mandible, pyramidal in shape, raising to left ear lobe (Fig-1). The overlying surface is irregular, and the overlying skin is same as surrounding.

On palpation the swelling was firm in consistency, non fluctuant and non compressible although there was mild tenderness present on palpation. The facial and eye movement were normal. A provisional diagnosis of benign tumor of the left parotid gland was taken into consideration.

Ultrasonography of the left parotid gland showed a hypoechoic area. Magnetic resonance imaging (MRI) revealed a lesion measuring around (3.3 x 3.3cm), well-defined, lobulated, heterogeneous lesion involving left parotid gland. Lesion on T1 weighted MR image (Fig-2) appeared hypointense and appeared hyperintense on T2 weighted MR images (Fig-3)

After obtaining the informed consent of the patient, excision of the superior lobe of the left parotid gland along with the tumor mass was made. A modified Blair incision was given to the left preauricular region, platysma muscle and superficial musculoaponeurotic layer were dissected. The tumor was identified and then the eneucleation of tumor was done and layer wise closure was done (Fig-4).

DISCUSSION:

World Health Organization (1972) defined PA as a well-defined tumor characterized by its pleomorphic or mixed appearance. There is intermixing of the clearly recognizable epithelial component with mucoid, myxoid and chondroid component.[6] Although the lesion presents several histological features due to the different compounds with a myxoid or chondroid matrix, it is generally considered to be a benign neoplasm.[7]

Pleomorphic adenomas are generally discovered during routine physical examination, as an asymptomatic mass. PA has a glandular origin in the head and neck region and usually manifests as a mobile, slow progressing, asymptomatic firm swelling that does not cause ulceration of the overlying mucosa.[8] Based on clinico-pathological and immune- histochemical features of 60 cases of PA in Brazil, Alves *et al* reported that the tumor occurred commonly between the 3rd and 5th decades of life, and 37/60 (62%) of the affected patients were women.[9] Imaging modalities such as computed tomography (CT) and Magnetic Resonance Imaging (MRI) are essential aids in diagnosis. MRI is favored on the basis of better soft tissue delineation, detailed tumor margin description and the tumor relationship with the surrounding structures.[10]

Enucleation, enucleoresection and superficial or total parotidectomy with preservation of the facial nerve formed the mainstay of surgical

treatment.[11] Almost all PAs can be effectively treated by surgical procedures. PAs, small, mobile, with a clearly observed capsule located in the superficial lobe/tail of the parotid gland can be removed by limited surgery with few complications. Aggressiveness and extent of the tumor mass and its relation with the facial nerve form the important criteria which dictate the choice of treatment of pleomorphic adenoma of the parotid gland. The main complications were temporary/permanent facial nerve palsy, Frey syndrome/gustatory sweating and parotid cancer development. Patients treated by different surgical procedures can be affected by these dysfunctions. Superficial parotidectomy (SP), total parotidectomy (TP), and extracapsular dissection (ECD) replaced enucleation surgical technique.[12,13,14] Alternative really novel therapeutic approach might consist in injecting the patients with autologous endothelial pro- genitor cells, to accelerate tissue revascularization and prevent a surgical approach.[15,16,17,18]

CONCLUSION:

Enucleation, enucleoresection and superficial or total parotidectomy with preservation of the facial nerve are the main treatment modalities, which can also lead to certain complications like temporary/permanent facial nerve palsy, Frey syndrome/gustatory sweating and parotid cancer development. Alternative approaches includes injecting the patients with autologous endothelial pro-genitor cells, to accelerate tissue revascularization and prevent a surgical approach.

- **Consent For Publication-** Not Applicable
- **Availability Of Data And Materials-** Not Applicable

Authors Contributions

- 1st author analyzed and interpreted the patient data and contributed in writing manuscript
- 2nd author did the surgery
- 3rd author did the surgery
- 4th author assisted the surgery
- 5th author analyzed and interpreted the patient data

Acknowledgement- Not Applicable

Fig -1: Frontal view and lateral view of face showing swelling on left side of face

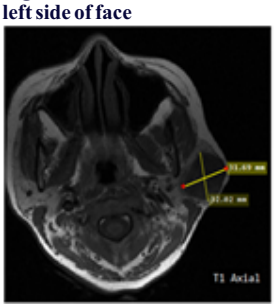

Fig-2 Axial MRI T1

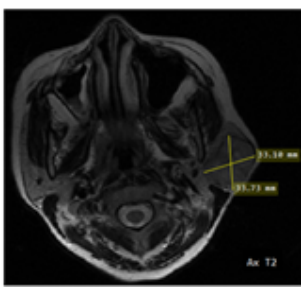

Fig-3 Axial MRI T2

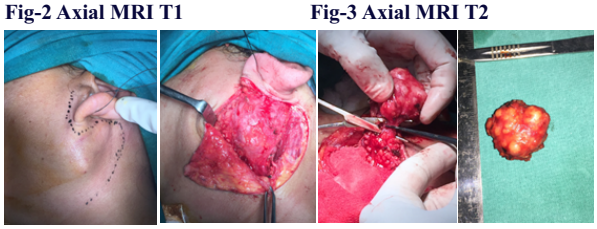

Fig -4: Showing the modified Blair incision along with enucleation of tumor

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