Original Research Paper

Volume - 11 | Issue - 12 | December - 2021 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Dentistry

PLEOMORPHIC ADENOMA OF PAROTID IN A YOUNG PATIENT: A RARE CASE REPORT

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ABSTRACT Of all Neoplasia of head and neck region, Salivary gland tumors are rare, comprises less than 3%. The most common salivary gland tumor is Pleomorphic adenoma , reports for about 60% to 80% of the benign tumors of the salivary glands and for 60% to 70% of all the parotid tumors. The tumor manifests wide cytomorphologic and architectural diversity. Occurs during fifth and sixth decades of life, female to male ratio being 2:1. It has a high rate of recurrence and chances of malignant transformation. We present a case of pleomorphic adenoma diagnosed early in a young patient.[1,2]

KEYWORDS : Pleomophic Adenoma, Salivary Glands, Parotid, Neoplasm Recurrence.

INTRODUCTION:

Pleomorphic adenoma occurs most frequently in the major salivary glands, about 63% arises in the superficial lobe of parotid gland. More common involvement is right side than left side and female to male ratio is 2:1. Its incidence is rare in children and young adults and occurs during fourth to sixth decades of life. It has a high rate of recurrence and chances of malignant transformation. These feature of pleomorphic adenoma entail their accurate diagnosis and suitable management. We present one such case of pleomorphic adenoma diagnosed early in a young patient.[1,2]

Case Report :

A 11 year old male patient accompanied by parent came to the out patient department with a chief c/o a swelling in his right side of the face since 1 year . History revealed that the painless swelling on the right pre-auricular region of one year duration, followed by which the patient presented to the hospital due to concern for gradual increase in size of swelling. Patient experiences mild pain while mastication and swallowing.

On extraoral examination facial asymmetry due to swelling was noted on right preauricular region. A single diffuse swelling in right pre-auricular region, roughly measuring 2.5×2 cm in its greatest dimension. The color of the swelling was similar to that of surrounding area. The borders were diffused, the surface was smooth with no secondary features. On palpation, the swelling was non tender, firm in consistency and freely movable in all planes. No local rise in temperature, non fluctuant, non compressible, non reducible and no pulsations felt. No palpable regional lymphadenopathy bilaterally elicited.(Fig.1,2)

On TMJ examination maximal mouth opening (Inter-Incisal distance) was 5.1cm. Also, patient gave a history of tenderness on right temperomandibular joint during lateral movements of jaw. Deviation of the mandible towards left on opening and closing of the mouth. On auscultation, exaggerated movements of right temperomandibular joint was felt. No clicks felt bilaterally.

On intraoral examination, presence of mixed dentition with caries in relation to 54,64,85 and pre-shedding mobility in relation to 85,83.

The medical history was unremarkable, no other abnormalities were found on clinical examination.

On the basis of history given by the patient and clinical features, a provisional diagnosis of benign soft tissue neoplasm in right preauricular region (possibly TMJ/ Right Parotid).

Patient was subjected for routine radiographic investigations, Orthopantomograph, revealed mixed dentition, no gross pathological findings(Fig.3). On TMJ tomogram, revealed bilateral exaggerated movements at maximal mouth opening position with both condyles surpassing the articular eminence(Fig.4).

On Ultrasonography of right parotid gland, revealed a heterogenous, well defined hypoechoic, lobulated lesion measuring 1.8*1.8*1*1 cm, involving the superficial lobe of right parotid gland, with minimal internal vascularity. (Fig.5).

On Guided Fine Needle Aspiration Cytology, revealed a clusters and sheets of ovoid and spindle shaped cells with abundant well defined pale cytoplasm. The cells have round to ovoid nuclei with finely granular chromatin. Few myoepithelial cells display enlarged nuclei and mild atypia. Fibrillary chondro myxoid material is also observed. Features suggesting of pleomorphic adenoma of right parotid gland.

On Contrast enhanced CT, showed a well defined iso to hyperdense lesion measuring 1.6*1.5 cm in size with precontrast CT value of 32 to 37 HU and post contrast CT value of 47 to 63 HU in the superficial lobe of right parotid gland. Suggestive of pleomorphic adenoma / lymphadenopathy.(Fig.6)

Surgical procedure:

Patient was scheduled for surgical excision of the tumor.and performed under general anesthesia. The specimen collected and sent for histopathological examination and obtainted a diagnosis of Pleomorphic adenoma of right parotid gland.

DISCUSSION:

Pleomorphic adenoma is the most common salivary gland neoplasm also known as benign mixed tumor and accounts for 60%. It frequently occurs in middle age and in women. The tumor arises mainly in the major salivary glands, 63% arising in the superficial lobe of parotid gland.[3] It emerges as a slow growing, firm, painless mass that is regularly diagnosed long after the lesion has started. Though the etiology of the tumor is unknown, the prevalence has been found to increase 15-20 years after exposure to radiation. One study proposed that the simian virus (SV40) may play a causative part in the development of pleomorphic adenoma.[4]

The tumor is encapsulated in the major salivary glands but not in the minor salivary glands. The epithelial component has divergent growth patterns, including trabecular, tubular, solid, cystic, and papillary architecture which consists of epithelial and myoepithelial cells. Cells of epithelial origin are mostly cuboidal produce ductal structures and are intermingled with mesenchymal elements which give rise to myxoid, hyaline, cartilaginous, and osseous change. [5,6] Cells of myoepithelial origin give arise to plasmacytoid, epithelioid, spindle, oncocytic, or clear cell morphology. Few authors have confirmed that a prominent hyalinized stroma with tumors that may have a tendency for malignant change. Presence of necrosis and increased mitosis in

pleomorphic adenoma; notable evidence of malignant change is suspected.[7,8]

Immunohistochemistry (IHC) may be used in differentiating pleomorphic adenoma from other tumors. Tumor specific markers which can be used are Keratin, Cam 5.2 and EMA, P-63, Calponin, Maspin, S-100, HHF-35, Muscle-specific actin, Glial fibrillary acidic protein, BMP and Aggrecan. PLAG1and HMGA2 gene translocations have been identified as tumor-specific in pleomorphic adenoma. The treatment of pleomorphic adenoma includes surgical excision which could be by partial or total parotidectomy. Since these tumors are radio-resistant, use of radiotherapy is therefore contraindicated.[9,10]

Recurrences are common in younger patients than in older. According to McGregor AD *et al,* 31 recurrent pleomorphic adenoma cases over 10 year period 1974-1983. They observed that these patients presented with their primary tumor at a remarkably younger age than those who remained disease-free. L. O. Redaelli de Zinis and co-workers in 2005 observed that higher probability of tumour recurrence in multinodular lesion. The mucin 1 gene (MUC1) has related to the recurrence of the tumour and to be associated with malignant transformation.[13]

Since the present case was diagnosed and treated early, it would probably reduce the chance of recurrence and malignant transformation.[14,15]

Figures - Facial Profile

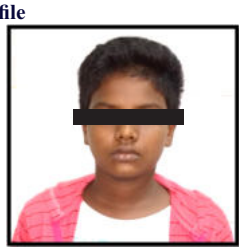


Figure : 1

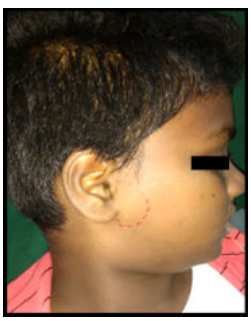
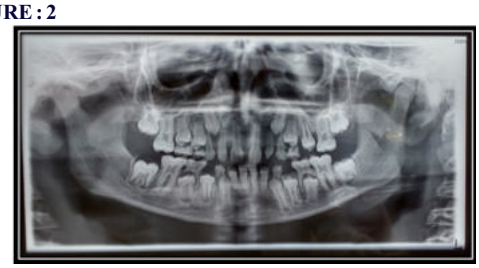
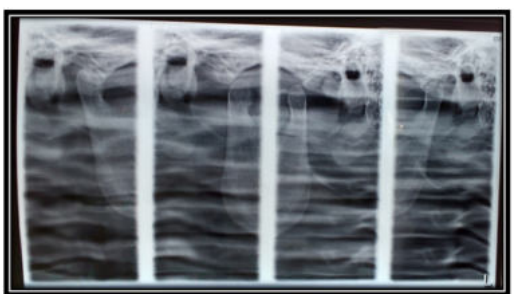


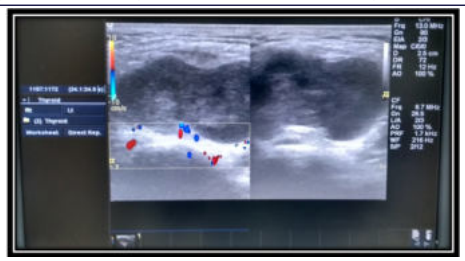
FIGURE : 2



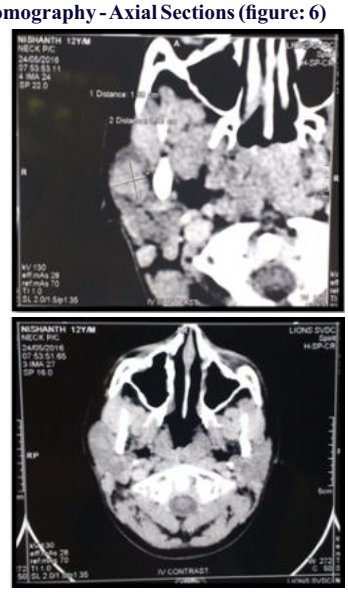
Orthopantomogram (figure : 3)



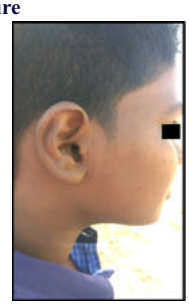
Tmj Tomogram (figure : 4)
Ultrasonography (figure : 5)



Computed Tomography - Axial Sections (figure: 6)



(figure : 7)
Post – Operative Picture



CONCLUSION:

The present case was diagnosed early in a young patient who came for a routine dental checkup. The mass was excised and confirmed as pleomorphic adenoma on histopathologic examination. Early diagnosis and timely management rescued the patient of a disfigurement which is generally seen with this neoplasm. Patient showed uneventful healing and no sign of recurrence after one and a half year of follow up. Since the patient was young, long term follow up is required.

REFERENCES:

1. Subhashraj K. Salivary gland tumors: a single institution experience in India. Br J Oral Maxillofac Surg. 2008;46:635–638.
2. Eveson JW, Cawson RA. Salivary gland tumours. A review of 2410 cases with particular reference to histological types, site, age and sex distribution. J Pathol.1985;146:51–58.
3. Lingam RK, Daghir AA, Nigar E, Abbas SAB , Kumar M. Pleomorphic adenoma (benign mixed tumour) of the salivary glands: its diverse clinical, radiological, and histopathological presentation. Br J Oral and Max Surg. 2011;49:14-20.
4. Terán E C, Villasana EM. Lip pleomorphic adenoma. Rev Odonto Mex. 2012;16:102-104.
5. Spiro RH. Salivary neoplasms: overview of a 35-year experience with 2,807 patients. Head Neck Surg. 1986;8:177-184.
6. Martinelli M, Martini F, Rinaldi E, *et al*. Simian virus 40 sequences and expression of the viral large T antigen oncoprotein in human pleomorphic adenomas of parotid glands. Am J Pathol. 2002;161:1127- 1133.
7. Ito FA, Jorge J, Vargas PA, Lopes MA. Histopathological findings of pleomorphic adenomas of the salivary glands. Med Oral Patol Oral Cir Bucal. 2009;14:E57-E61.
8. Chen YK, Lin CC, Lai S, Chen CH, Wang WC, Lin YR, et al. Pleomorphic adenoma with extensive necrosis: report of two cases. Oral Dis. 2004;10(1):54-9. doi: 10.1046/j.1354-523X.2003.00966.x.
9. Forty MJ, Wake MJC. Pleomorphic salivary adenoma in an adolescent. Br Dent J. 2000;188():545-6. doi:10.1038/ sj.bdj.4800534.
10. Tiago RSL, Castro GA, Ricardo LAC, Bühler RB, Fava AS. Adenoma pleomórfico de parótida: aspectos clínicos, diagnósticos e terapêuticos. Rev Bras Otorrinolaringol. 2003;69(4):485-9. doi: 10.1590/S0034-72992003000400008.
11. Oliveira JGP, Barros RMG, Barros EG, Monteiro JCC, Martinez CR. Adenoma

plemórfico em paciente infantil. Rev Cir Traumatol BucoMaxilofac. 2009;9(3):35-42.
12. McIlveen LP, Sharp HK, Schuman, NJ. Pleomorphic adenoma of a minor salivary gland: report of a case. Quintessence Int. 1987;18(3):211-3.
13. Dhanuthai K, Boonadulyarat M, Jaengjongdee T, Jiruedee K. A clinico-pathologic study of 311 intra-oral salivary gland tumors in Thais. J Oral Pathol Med. 2009;38(6):495-500. doi: 10.1111/j.1600-0714.2009.00791.x.
14. Ribeiro-Rotta RF, Cruz ML, Paiva RR, Mendonça EF, Spini TH, Mendonça AR. O papel da ressonância magnética no diagnóstico do adenoma pleomórfico: revisão da literatura e relato de casos. Rev Bras Otorrinolaringol. 2003;69(5):699-707. doi: 10.1590/ S0034-72992003000500016.
15. Neves JC, Lima MCA, Sobra APV. Estudo clinicopatológico de 106 adenomas pleomórficos de glândula salivar maior. J Bras Patol Med Lab. 2007;43(5):347-54