

Lipoma of Parotid Gland: A Survey On Case Report and Literature

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Abstract: Lipomas are common benign soft tissue neoplasms, however they are found seldom within the deep lobe of the parotid gland. Surgical intervention in parotid mass is difficult owing to the proximity of the facial nerve and so information of anatomy and surgical procedures are essential. A sixty-four-year-old female presented with a left cheek mass from one-year period that was painless and didn't grow in size with chewing. A high-frequency sonography visualized a hypoechoic mass measuring $3.2 \times 2.6 \times 2$ cm in left parotid region with well-defined margins and heterogeneity for the presence of fibrous septae. Magnetic resonance imaging confirmed, on T1- and T2-weighted images, a well-described hyper intense lesion within the left parotid gland that was hypo intense on STIR images. A first-class needle aspiration cytology (FNAC) became conclusive for the presence of "homogeneous proliferation of mature adipocytes," compatible with lipoma. She then underwent left superficial parotidectomy. Histopathology confirmed it as a parotid lipoma. The patient had an uneventful recovery, with a normal facial contour and intact seventh cranial nerve function. Lipoma of the parotid gland is extremely rare and may be clinically deceptive. CT and MRI, have a vital position because they locate the neoplasm on the parotid gland and facilitate the diagnosing of lipoma. Benign or malignant differentiation within the mass of parotid glands is of high importance.

Keywords: Lipoma, Parotid Gland, MRI, Parotidectomy.

INTRODUCTION

Lipoma is the commonest benign tumour of mesenchymal origin, thinly encapsulated found all over within the body wherever fat is present [1]. Inside the head and neck, this tumour isn't uncommon [2]. About 15 % of all lipomas arise inside the head and neck wherever it appears largely within the posterior cervical triangle and brow. Sometimes, it can appear within the pharynx, larynx, within the oral cavity, parotid gland, and para-pharyngeal space [1, 3]. The lipoma of the parotid gland is an uncommon entity comprising less than 3-4%. Lipoma is usually a painless, asymptomatic and slow developing swelling. Lipomas of parotid normally arise in a sixth decade [5]. Those in deep lobe are suggested to be most within the fourth decade [4]. Histologically, those tumors contain fat cells, albeit subtypes alongside angio lipoma, angiomyolipoma, osteo lipoma and chondroid lipoma containing totally different mesenchymal tissues can be present [6]. Currently developed surgical analysis techniques, that embrace the usage of CT, magnetic resonance imaging (MRI), and fine needle aspiration (FNA), have enabled a further correct assessment of these tumors and a rational approach to their management. They're rarely thought of in the initial differential diagnosis of parotid mass and mistaken for alternative parotid neoplasms. Only a few cases are reported about parotid lipoma.

CASE PRESENTATION

A sixty-four-year-old female presented with a left cheek mass from one-year period. It became a sluggish-growing, painless mass that didn't grow in size with chewing, and it had been not associated with any facial abnormality. On physical examination, it had been found to be 3×2 cm, firm, and well-circumscribed, rubbery, noncompressible, mild mass over the left parotid region. The superimposed skin found to be regular with no other mass palpable in head and neck region. Rest of the otolaryngological examination was normal. The facial nerve was intact without any facial muscle weakness.

A high-frequency sonography visualized a hypoechoic mass measuring $3.2 \times 2.6 \times 2$ cm in left parotid region with well-defined margins and heterogeneousness for the presence of fibrous septae. MRI confirmed, on T1- and T2-weighted images, a well-described hyper intense lesion within the left parotid gland that was hypo intense on STIR images. A first-class needle aspiration cytology (FNAC) became conclusive for the presence of "homogeneous proliferation of mature adipocytes," compatible with adipose tumor.

She underwent left superficial parotidectomy. The facial nerve was recognized and preserved. Intraoperatively, the mass discovered to be a properly localized lipomatous lesion creating an investment

within the parotid, superficial to the facial nerve apart from minimum deep lobe extension at rock bottom margin. It had been dissected off the facial nerve and excised as a whole. The patient was discharged four days later without any complication. Specimen was sent for HPE examination that confirmed it as the parotid lipoma.

DISCUSSION

Lipoma of salivary glands is kind of uncommon with the best possible frequency mentioned within the parotid gland that affords ordinarily adipose tissue. In fact, lipomas histologically gibe healthy mature adipose tissue [4]. However, the presence of a fibrous capsule facilitates to differentiate them from ordinary secure fat aggregation.

Lipomas are some of the utmost common smooth tissue tumors and about 15 % of all lipomatous tumors arise among the head and neck, particularly among the superficial and subcutaneous layers. The very best incidence of lipoma within the parotid gland is 4.4% [1], with men most of times affected with a magnitude relation of 5:1[3]. Typically, intraparotid lipoma arises among the superficial lobe in 75% of cases, whereas within the deep lobe extending to the para-pharyngeal space in 8.5% of instances [5]. They progress asymptotically until reaching a major size. Clinically, the parotid adipose tumor seems as gentle, step by step growing, painless accurately delineated asymptomatic mass [4].The clinical designation is usually tough, presumably owing to low index of suspicion. These days, the preoperative imaging incorporates a crucial position to diagnose the character of lesions properly. It is important characteristic is to put off extra-parotid subcutaneous lesions, and secondly to verify the diagnosis of lipoma.

An accurate scientific and instrumental analysis of parotid gland masses, alongside every CT scan and magnetic resonance imaging, will make a pre-operative diagnosis of lipoma. These techniques are a properly connected imaging method, and that they may be helpful in giving records concerning pathological functions of the tumors, to guage the size of the neoplasm and to program the acceptable surgical technique.

Right prognosis and localization of the mass are essential for making surgical plans and intraoperative alternatives. Ultrasound will provide an exact and rapid analysis of lipoma and shows mostly well-defined hypoechoic lesion. The presence of a well-defined mass on CT with a density of -50 to -150 Hounsfield units is diagnostic of a lipoma[3]. MRI remains the most effective technique to diagnose lipomas preoperatively that shows high signal intensity on T1- and T2-weighted images without contrast enhancement and with a weak signal on fat-suppressed images. Magnetic resonance imaging can even outline

the bounds of lipoma from traditional adipose tissue (subcutaneous tissue) with a “black-rim” across the mass, a distinction that can't be made of CT [1, 3].Moreover, magnetic resonance imaging is satisfactorily correct to differentiate between lipomas and Liposarcoma. The lipoma is homogeneous on magnetic resonance imaging whereas the tumor is a lot of heterogeneous in Liposarcoma [6].The lipoma is also distinguished from properly-differentiated Liposarcoma via the presence of thick septa, the presence of nodular/globular or non-adipose mass-like regions [6].While FNA is significant in the diagnosis of parotid tumors [2], its accuracy lows all the way down to less than 50% within the case of lipoma of parotid [7]. Failure to notice malignant cells within the FNA doesn't exclude a malignant neoplasm. Hence, several surgeons refrain themselves from trying an FNA for the diagnosis of such masses.

The surgery of lipoma within the parotid is debatable. Several follow a proper superficial parotidectomy with full exposure of the facial nerve and its branches for deep parotid lobe lipoma [7, 8].Surgical procedure excision of the well-encapsulated neoplasm with a rim of salivary gland tissue are another surgical approach. Throughout surgery, the facial nerve is diagnosed and ascertained up to its peripheral branches to avoid the neural block.

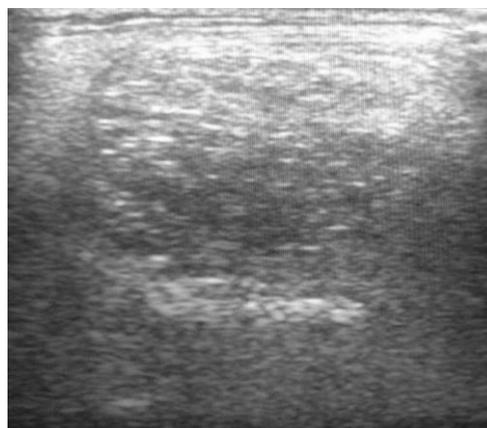


Fig 1: Neck Ultrasonography Image

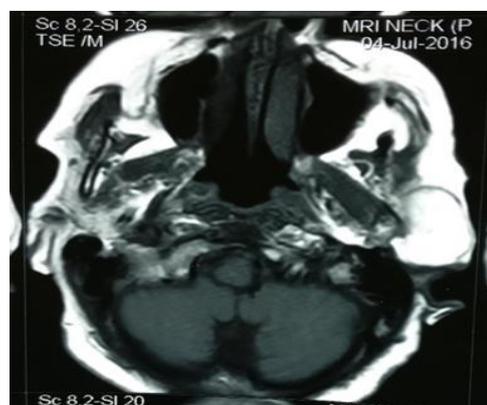


Fig 2: Axial T1W Image

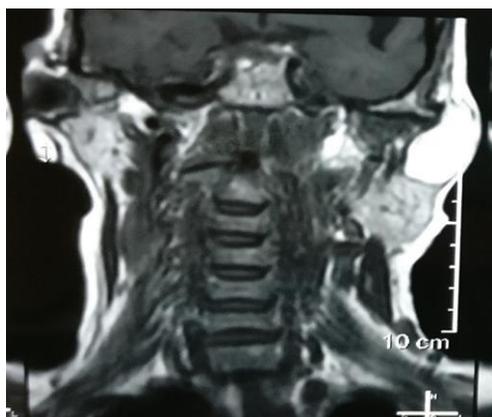


Fig 3: T1W Coronal Image



Fig 4: T2W Sagittal Image



Fig 5: STIR Coronal Image

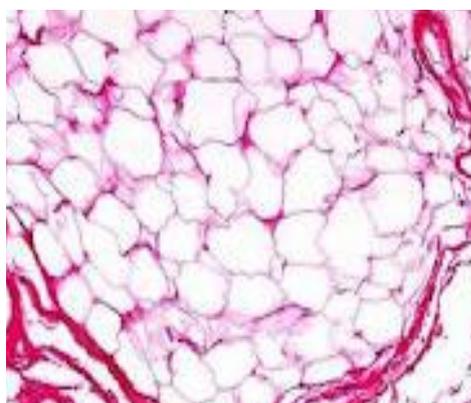


Fig 6: Histological Diagnosis Image

In Fig.1, the image Neck Ultrasonography demonstrates a lobulated Hypoechoic mass in left parotid gland. Fig.2 depicts the Axial T1W image that shows hyper intense lesion in Left parotid gland. Fig.3 is T1W coronal image which shows hyper intense lesion in left parotid gland. The T2W sagittal image in Fig.4 shows hyper intense lesion in left parotid gland. In Fig.5 the STIR coronal image shows the hypo intense lesion in left parotid gland. Figure 6 is the Histological diagnosis of lipoma which is comprised of the homogeneous proliferation of mature adipocytes lobulated with a fine fibrous septae

CONCLUSION

Lipoma of the parotid gland is extremely rare and may be clinically deceptive. CT and MRI have a vital role in locating the tumour on the parotid gland and facilitate the identification of adipose tumor. Benign or malignant differentiation within the mass of parotid glands is of high importance. Operative identification of this distinction determines the treatment approach. Though the lipomas seldom occur within the parotid gland, they must be taken into thought within the initial diagnosis.

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