

Lipoma of the Parotid Gland- A Rare Entity

MONA BARGOTYA¹, KIRAN AGARWAL², A S SAUMYA³, NITIN SOOD⁴

ABSTRACT

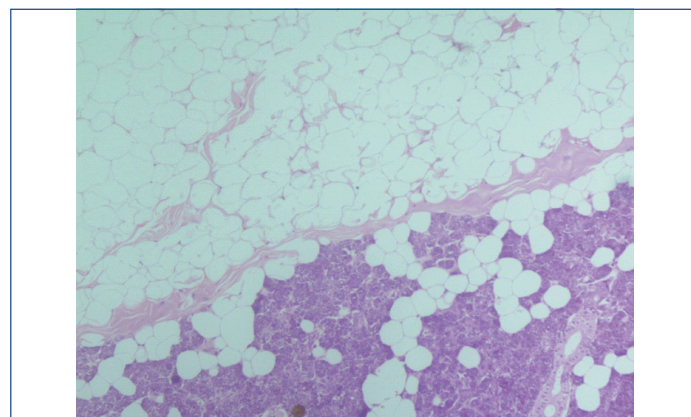
Lipomatous tumours are the most commonly encountered benign neoplasms of mesenchymal origin. The lipomas consisting entirely of mature fat are the most common soft tissue tumour of the body occurring predominantly in upper back, shoulder and abdomen; but have been virtually reported arising in every location where fat is normally present. The incidence of lipoma in parotid gland is rare and it commonly presents as gradually progressing painless mass. Hence, it is seldom considered in the differential diagnosis of parotid swelling. Fine Needle Aspiration Cytology (FNAC) has been proved to be unreliable in diagnosing parotid lipomas, but histopathology helps in making the correct diagnosis. Computed Tomography (CT) scan and Magnetic Resonance Imaging (MRI) can lead to an accurate pre-operative diagnosis of parotid lipoma as well as to evaluate the location of the tumour to programme the correct surgical approach. The present case was of parotid lipoma involving the superficial lobe in a 40-year-old male who presented with left parotid swelling. Lipomas are rarely observed in the parotid gland and this case was being presented because of the relative rarity of lipomas in the parotid region.

Keywords: Benign tumour, Lipomatous tumour, Salivary glands

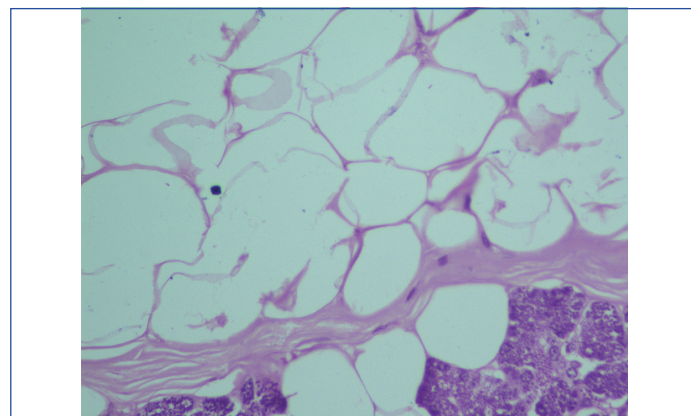
CASE REPORT

A 40-year-old male presented with a painless swelling in the left parotid region, which gradually increased in size, since last five years. On examination, the swelling over the left parotid region measured 6.5×6 cm and was soft in consistency, well defined, mobile and non-tender. The surface of the swelling was smooth and the overlying skin was normal with no tumour protrusion through the skin. There was no associated cervical lymphadenopathy or past history of trauma, infection or swelling in the neck region. Facial nerve function was intact and no facial muscle weakness was observed. CT scan revealed a well demarcated, low density mass lesion measuring 5.5×4×3 cm involving the superficial lobe of left parotid gland. FNAC revealed occasional fibrofatty fragments and hence, was not helpful in making the diagnosis. Superficial parotidectomy with facial nerve preservation was performed. The gross examination of the surgical specimen disclosed a well encapsulated mass measuring 5×4×3 cm. Cut surface showed a homogenous, yellowish coloured, well encapsulated mass surrounded by a thin rim of salivary gland tissue. No areas of haemorrhage or necrosis identified [Table/Fig-1]. Microscopic examination revealed a well encapsulated tumour comprising of mature adipose tissue with thin fibrous capsule along

with unremarkable adjacent salivary gland [Table/Fig-2,3]. On this basis, diagnosis of lipoma of the parotid gland was given. The postoperative recovery of the patient was uneventful with satisfactory facial contour and intact functional facial nerve. No postoperative complication or recurrence has been reported till date.



[Table/Fig-2]: Well encapsulated tumour comprising of mature adipose tissue with thin fibrous capsule along with unremarkable adjacent salivary gland (H&E 10X).



[Table/Fig-3]: Mature adipose tissue with thin fibrous capsule along with unremarkable adjacent salivary gland (H&E 40X).



[Table/Fig-1]: Well defined encapsulated mass homogenous yellowish in colour surrounded by a thin rim of salivary gland tissue measuring 5×4×3 cm.

DISCUSSION

Lipomas are defined as a benign collection of adipose tissue that is usually surrounded by a fibrous capsule. The incidence of lipomas in the head and neck region is about 13%, with the posterior neck being the most common sub site [1,2]. In rare cases, lipomas can arise in the oral cavity, pharynx, larynx and parotid gland. It has been recognized that intra-glandular lipomas can be very well located within pancreas, breast and kidneys. However, the incidence of intraglandular parotid lipomas is very rare although adipose tissue is normally present in the parotid gland and has been mainly described in case reports with the incidence range of 0.6% to 4.4% and most of the series reporting an incidence of 1% [3]. They occur most commonly in 5th and 6th decade of life and with a definite male predominance and a prevalence which is ten times higher in males than in females [4]. They are generally well circumscribed, clinically slow growing and often asymptomatic soft tissue lesions. Confirmed diagnosis is made on histopathological examination supported with clinical as well as radiological evidences. Radiographical imaging, particularly CT scan and MRI, help in better assessment and diagnosis of this entity [5].

Lipomas are the most commonly encountered benign soft tissue neoplasm of mesenchymal origin which exhibit histological similarity to mature adipose tissue and the presence of a fibrous capsule helps to differentiate them from simple fat aggregations [6]. Aetiological factors of lipoma include obesity, diabetes, hereditary, radiation, endocrine disorders, various drugs and trauma. Two theories have been proposed for the development of lipomas. One theory states that the hypertrophy from increased uptake of acetate and increased fatty synthesis leads to the development of the lipomas [7]. Proliferation of misplaced islands of lipoblasts or a metaplastic transformation of connective tissue into fatty tissue is the another proposed theory [8].

Clinically, parotid lipomas are difficult to diagnose. They generally manifest as relatively asymptomatic, soft, compressible, mobile, slowly growing painless mass over the parotid area. Intra-glandular lipomas involving the superficial lobe of parotid gland are comparatively more common than the deep lobe. There are two types of lipomas reported including the commoner well circumscribed lipoma and the other less commonly occurring diffuse lipomatous type. Depending upon the type of lipoma present there may be associated ductal obstruction leading to sialadenitis in few cases. The important keys for preoperative and intraoperative decisions are proper diagnosis as well as localization of the mass. For identifying the size, location as well as the histological characteristics of lipomatous lesions pre-operative imaging studies are quite useful and they may even help in planning the extent as well the type of surgery. The typical characteristic appearance of lipomas on CT scan is of homogeneous masses with few septations without showing any contrast enhancement. Preoperatively lipomas could

be diagnosed with MRI which defines the margin of lipoma as 'black rim' and aids in distinguishing it from surrounding adipose tissue [3,9]. FNAC, though very helpful in diagnosis of parotid tumours, has been proven to be unreliable in diagnosing parotid lipomas. Surgical management of parotid lipomas is challenging as well as controversial. The major concerns should be the postoperative aesthetic and functional results. Most of the authors suggest a superficial parotidectomy as the usual surgical management with near total absence of recurrence [10]. However, lipomas extending into the deep lobe require a total parotidectomy with facial nerve preservation. Few authors also advice repositioning of the superficial lobe over the nerve, after resection of deep lobe lipoma, to prevent facial decompression [11]. The other favoured surgical approach is enucleation and excision of the well encapsulated tumour with a rim of parotid gland tissue.

CONCLUSION

Due to the rare occurrence, lipoma of the parotid gland is hardly ever included in the differential for swelling of parotid gland. Neoplasms of salivary gland, both benign and malignant, form the first differential for a mass in the parotid region. Combined and correct clinical and imaging studies of parotid masses can lead to an accurate pre-operative diagnosis of parotid lipomas. Imaging studies are also important to evaluate the location of the tumour and hence to programme the correct surgical approach. Lipomas of the parotid gland are cured with a simple parotidectomy with rare complication or recurrences.

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PARTICULARS OF CONTRIBUTORS:

1. Senior Resident, Department of Pathology, Lady Hardinge Medical College, New Delhi, India.
2. Director, Professor, Department of Pathology, Lady Hardinge Medical College, New Delhi, India.
3. Resident, Department of Pathology, Lady Hardinge Medical College, New Delhi, India.
4. Resident, Department of Radiodiagnosis, Lady Hardinge Medical College, New Delhi, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Mona Bargotyia,
House no. 165, 2nd Floor, Vinoba Puri, Lajpat Nagar, New Delhi, India.
E-mail: drmona2208@gmail.com

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