Lipoma of the deep lobe of parotid gland – a case report and review of literature

A. Chakravarti · Rajiv Dhawan · T. B. Shashidhar ·
Shakuntala · J. K. Sahni

Abstract Lipoma of deep lobe of parotid gland is a rare clinical entity. Less than 10 cases have been reported in the literature in our knowledge. Because of their rarity, they are not often considered in the differential diagnosis of parotid tumors. A case of 45-year-old man with an unusually large deep lobe lipoma of parotid gland is presented in this article which was surgically managed by total conservative parotidectomy. The clinical picture, radiological and histopathological features of this entity is being discussed here. Review of literature of this clinical situation has been presented in the present article.

Keywords Lipoma · Parotid · Deep lobe

Introduction

Lipomas are the one of the most common benign tumors of adulthood in head and neck region. The lipoma of parotid gland is a rare entity, comprising 0.6–4.4% of all parotid tumors [1]. The lipoma of deep lobe of parotid gland is an even rarer clinical situation. Lipoma is mostly a painless, asymptomatic and slow growing swelling. Lipomas of parotid generally occur in seventh decade where as those in deep lobe has been reported to be highest in fourth decade [2]. A rare case of unusually large sized lipoma of deep lobe parotid gland is being reported along with review of published English literature.

Case report

A 45-year-old man presented to ENT services of our hospital with the complaint of a painless swelling on left side of the upper neck and face for last 4 years. The swelling was progressively increasing in size since then. On palpation, swelling was found to be 15 × 10 cm in size. The superior extent of this mass was reaching the tragus pushing the ear lobule upwards and was extending inferiorly to below the level of thyroid notch (Fig. 1). The mass was soft and lobulated, poorly mobile, non-fluctuant, non-pulsatile and non-transilluminant. The overlying skin was found to be normal. There was no other mass palpable in head and neck region. Oropharyngeal examination revealed that left lateral pharyngeal wall was pushed medially without any airway compromise. Bilateral facial nerve and all lower cranial nerves (IX–XII) were normal. Rest of the otolaryngological examination was normal. The contrast enhanced high resolution CT scan of upper neck region showed a homogenous, lobulated low density mass (–100 Hounsfield units) in the deep lobe of parotid gland with extension in the left parapharyngeal space (Fig. 2). The superficial lobe was found to be stretched over the tumor lying near the zygomatic arch. These CT findings were suggestive of a lipomatous tumor

A. Chakravarti¹ · R. Dhawan² · T. B. Shashidhar² ·
Shakuntala³ · J. K. Sahni⁴

¹Associate Professor

²Senior Resident

³Junior Resident

⁴Professor & Head

Department of Otolaryngology & Head Neck Surgery,
Lady Hardinge Medical College and Associated Hospitals,
New Delhi - 110 001
India

A. Chakravarti (✉)
e-mail: drchakravarti@yahoo.co.in

Fig. 1 Clinical photograph of patient and excised specimen

Fig. 2 High Resolution CT scan (axial cuts) showing the extent of large left side deep lobe parotid lipoma

of deep lobe of parotid gland. FNAC of the swelling was inconclusive and showed only fibrofatty tissue. The incisional biopsy on histopathology confirmed the diagnosis of lipoma.

In view of the clinico-radiological diagnosis of lipoma deep lobe parotid gland, total Parotidectomy with preservation of facial nerve under general anesthesia was planned. With modified Blair incision, the mass was exposed all around and was found to be well encapsulated. The normal superficial lobe was seen near zygomatic arch stretched over the lipomatous swelling involving whole of deep lobe. The main trunk of facial nerve was located. After superficial Parotidectomy, the whole of tumor was

removed while carefully separating the facial nerve branches from it. The lower branches of facial nerve could be separated from the tumor with great difficulty. Complete removal of tumor along with its parapharyngeal part was ensured. Post operatively, patient had grade III facial nerve paresis (House-Brackmann) which improved in 6 weeks. One year follow up does not show any recurrence in this patient.

Discussion

Lipomas of salivary glands are quite rare with the highest frequency reported in parotid gland. The deep lobe of parotid gland lipoma is even rarer clinical entity. Nearly 9 cases have been reported till now in our knowledge in published literature [2, 3]. Because of their rarity, they are not often considered in the differential diagnosis of parotid tumors. The lipomas histologically resemble normal adipose tissue, but the presence of a fibrous capsule helps to distinguish them from normal simple fat aggregation [4].

The lipoma parotid is generally a painless, slow growing, well delineated asymptomatic mass [5]. For the tumors having large parapharyngeal extension, the medial displacement of lateral pharyngeal wall and tonsil may be seen. This clinical finding which was present in our case was also seen in only one of the five cases reported in an earlier series [2]. The clinical diagnosis is generally difficult, probably due to low index of clinical suspicion.

Contrast enhanced high resolution CT scan is a useful radiological investigation in the diagnosis of parotid lipoma. Normal parotid tissue reveals positive density, whereas lipomatous tissue will give negative attenuation (–50 to –150 Hounsfield units) [6]. CT scan does not help much in differentiation of lipoma from surrounding adipose tissue. This information can be clearly gathered from MRI scan, which thus becomes the ideal radiological investigation for such tumors. The normal parotid gland has a high fat content and is easily visualized on both CT and MRI, and therefore both techniques can demonstrate whether a mass in that region is intraglandular or extraglandular [7]. In our case, the radiological opinion after CT scan was strongly in favour of lipomatous tumor of deep lobe of parotid gland without any further clue to histopathology. However, MRI could not be done because of financial constraints of the patient.

Fine needle aspiration cytology has not been found to be very helpful in the diagnosis of fatty tumors of the parotid [8]. In our case as well, the cytological study did not give sufficient information. Therefore, incisional biopsy was done to establish the diagnosis. The histopathology of the excised specimen did not show any sarcomatous change or salivary gland tissue in the lipomatous background. Sialolipoma, a relatively new histopathological sub-type of these tumors have also been reported in literature [9]. However, these further differentiations do not bring any significant change in the management of parotid lipomas.

Surgical management is total parotidectomy with the preservation of facial nerve. The lipoma resembles in appearance to the surrounding adipose and salivary tissue and it may be difficult to distinguish. Therefore, high incidence of facial nerve dysfunction has been reported after total conservative parotidectomy done for deep lobe parotid lipoma. Analysis of previous series reveals that around 50 % of the

reported cases have developed transient or permanent facial weakness postoperatively [2, 3]. The meticulous dissection in the form of full exposure of nerve and use of facial nerve monitor helps in protecting facial nerve function. The mild facial paresis observed in our case had complete recovery in 6 weeks.

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