Case Report - Cyst and Tumours

Giant Multilobular Lipoma of Neck - A Case Report

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Abstract

Rationale: Presenting a rare case report of a giant multilobular lipoma in submandibular and submental spaces of anterior and lateral aspect of neck. Patient's Concerns: The patient's main concern was persistent diffuse swelling in right lower face and neck region for 5–6 years. Diagnosis: The lesion was diagnosed as multiple septate lipoma measuring 11.5 cm × 10.5 cm × 6.5 cm involving submandibular region and anterior triangle of the right neck following fine-needle aspiration cytology and radiological imaging. Treatment: Extraorally complete surgical excision was carried out through submandibular approach under general anesthesia. Outcomes: The patient's postoperative recovery was uneventful. The patient was followed up on a monthly basis for 6 months. No recurrence was observed. The patient was satisfied with the treatment. Lessons: Lipomas should be considered as a rare differential diagnosis for anterior neck swelling. Biopsy is not necessary to confirm the diagnosis. Surgical excision remains the mainstay of treatment following final diagnosis through imaging modalities.

Keywords: Adult, esthetics, lipoma, neck, surgery

Introduction

Giant lipomas are benign skin tumours[1] seen in the trunk and extremities but rarely seen in the orofacial and anterior neck region.[2] The overall incidence of lipoma as cited in literature is 2.1/1000 individuals. Of these, only 13% are seen in head-and-neck region and the anterior neck space is a rare location.[2] Lipomas are slow-growing and well-encapsulated tumours and the average size is approximately 3 cm. Among the various types, only a few lipomas grow to an extremely large size and may be multilobulated. Lipomas >100 mm in one dimension or weighing more than 1000 g are classified as giant lipomas.[3] Although noninvasive and otherwise asymptomatic, giant lipomas can cause a visible cosmetic deformity and induce anxiety-related personality changes in the patient. A case report of a giant multilobular lipoma in submandibular and submental spaces of anterior and lateral aspect of the neck is presented here. The investigation, treatment protocols followed, and the related literature review are also presented here with a view to sensitize the oral and maxillofacial surgeons regarding the occurrence of this entity. The patient's postoperative recovery was uneventful and was followed up on a monthly basis for 6 months after which he was advised to follow-up in case of any recurrence of symptoms.

Case Report

A 52-year-old male patient reported to the department of oral and maxillofacial surgery in view of a persistent diffuse swelling in the right lower face and neck region for 5–6 years [Figure 1]. The swelling remained stable in size for 4–5 years, after which it started increasing and reached the present size. The patient reported associated pain in winter season. History for associated or concurrent medical illness, trauma, fever, pus discharge, and any other similar swelling in any other part of the body was negative.

The swelling was irregular in shape with diffuse margins, compressible, and extending from mandibular attachment of right buccinator muscle to upper neck region. It extended anteroposteriorly from the left parasymphysis region to 2 cm beyond the right angle of the mandible and measured...
approximately 15 cm × 9 cm. Inferior border of the right mandible and submandibular lymph nodes could not be palpated. Overlying skin was normal in colour and temperature. Intraoral findings were insignificant, except for mild obliteration of the right buccal vestibule.

Fine-needle aspiration cytology of swelling showed clusters of mature adipocytes and fat globules. Ultrasonography of the right submandibular region was suggestive of abscess formation. Plain computed tomogram and contrast-enhanced computed tomogram of the neck study gave an impression of moderate to large-sized well-defined multiple septate
lipomas measuring 11.5 cm × 10.5 cm × 6.5 cm involving submandibular region and anterior triangle of the right neck [Figure 2 and 3].

The patient’s informed consent was obtained for the surgery and for using his images for the purpose of publication. Complete surgical excision was planned which was carried out extraorally through submandibular approach [Figure 4]. The excised mass measured 120 mm × 95 mm × 40 mm and weighed 104.70 g; more than 10 lobules were present [Figure 5]. The tissue when immersed in a jar filled with formalin was found to be floating – confirming its fatty nature, which was also confirmed by histopathological examination [Figure 6].

The patient had an uneventful recovery and minimal scar with restored esthetics [Figure 7]. The patient was kept on follow-up for 6 months on monthly basis. No recurrence was observed. The patient was satisfied with the treatment.

**Discussion**

Lipomas are slow-growing benign mesenchymal tumours – uncommon in children – seen in adulthood (4th – 6th decade) – composed of mature fat cells and rarely causing any functional impairment. Although they are frequent in obese individuals, their metabolism is independent of normal body fat. There is no significant sex predilection. On reviewing the literature, it was found that anterior and lateral localization of lipoma in the neck is rare.[2]

Lipomatous masses can be labeled as simple lipomas, lipoblastomas, angiolipomas, pleomorphic lipomas, spindle cell lipomas, atypical lipomas, intramuscular–intermuscular lipomas, hibernomas, and liposarcomas.[4] Complicated lipomas are those which have multiple septae and involving deeper structures such as nerves or vessels. A lipoma is classified as a “Giant lipoma” if the size is >100 mm in one dimension – as in our case – or the weight is >1000 g.[5,6]

The incidence of lipoma as cited in the literature is 2.1/1000 individuals.[7] Approximately 5% of lipomas are multiple in occurrence. When the lipoma is large and the overlying skin or mucosa is thinned out, yellow colour may be visible along with dimpling. The application of ice is reported to cause hardening of the mass.[1]

Ultrasonography and computed tomogram or magnetic resonance imaging (MRI) scan are advised to differentiate large lipomas (>5 cm) from vascular tumours/abscesses and define their extensions and relations to vital structures especially as in our case. Of these, MRI is the most sensitive modality with a high negative predictive value.[8] The differential diagnosis of anterior neck mass includes lymphadenopathy, branchial cleft cysts, tumours of the salivary glands, carotid aneurysm, neurogenic tumours, dermoid cysts, thyroglossal cyst, ectopic thyroid nodule, and vascular leiomyomas.

In our case, plain computed tomogram and contrast-enhanced computed tomogram of the neck study was done which showed moderate to large-sized well-defined multiple septate lipoma measuring 11.5 cm × 10.5 cm × 6.5 cm involving submandibular region and anterior triangle of the right neck, which is very rare both in terms of size and location.

Indication for the removal of lipoma mainly remains cosmetic. Treatment options reported in the literature for lipomas range from steroid injection,[7,10] simple excision[7] to segmental extraction[9] and liposuction.[3] The mainstay of treatment is surgical excision. Recurrence is extremely uncommon except in intramuscular lipomas which are rare in orofacial region. In our case, complete surgical excision was done extraorally through submandibular approach. It is important to carefully remove the tumour with capsule to prevent a recurrence.

Complications after excision of a lipoma most commonly include hematoma, followed by seroma, ecchymosis, infection, deformity, injury to adjacent structures, excessive scarring, and fat embolus.[3] But in our case, the recovery was uneventful.

Intraoperatively, lipomas may be seen as soft, yellow, shiny, smooth, mobile, encapsulated, and occasionally lobulated subcutaneous masses.[2] Histologically, mature fat cells are seen arranged in lobules and surrounded by fibrous capsules. In our case on exposure, the neoplasm initially resembled a single yellowish mass covering the anterior margins of the sternocleidomastoid muscle. Blunt dissection was carried out to delineate the extent of the mass. Except for the facial artery which was found to be running tortuously through the lesion, no other vital structures were encountered. Submandibular gland was found to be displaced inferiorly due to extension of the lesion medial to the mandible. The lesion was “shelled–out” in toto and found to be lobulated which was initially giving an appearance of a single yellowish mass. Due to size and multilobular nature (>10), this may be labeled as giant multilobular lipoma.

**Conclusion**

Fine-needle aspiration cytology, ultrasonography, computed tomography (CT), and MRI are key diagnostic modalities for uncommon giant lipomas of head and neck. It is important to
differentiate benign lesion from malignant prior to treatment. Furthermore, the proximity to vital structures should be taken care of. MRI is the modality of choice for imaging lipomas not only to confirm the diagnosis which is usually strongly suggested by ultrasound and CT but also to better assess for atypical features suggesting liposarcoma. Lipomas can be considered a rare differential diagnosis for anterior neck swelling. Treatment of choice is complete surgical excision as it minimizes the chances of recurrence.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that name and initials will not be published and due efforts will be made to conceal the identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

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