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Lipomas of Deep Neck Space – Report of Two Cases and Review of Literature

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Abstract: Lipoma is the most common neoplasm of mesenchymal origin. Only 13% of them arise in the head and neck region and most of these occur subcutaneously in the posterior neck. Rarely, they can develop from deeper planes in the anterior neck, infratemporal fossa, in or around the oral cavity, pharynx, larynx, and parotid gland. Clinically, they can be confused with other benign lesions; however, CT and Ultrasonography allows a specific diagnosis to be made in virtually all cases. Here we present two cases of rare presentation of Head and Neck lipoma and the review of literature of such presentations.
Keywords: Lipoma, parotid, anterior triangle.

INTRODUCTION:

Lipomatous tumors are the most common neoplasms of mesenchymal origin. Of lipomas, 13% arise in the head and neck, with the posterior neck being the most common sub site [1, 2]. Lipomas are composed of a benign collection of adipose tissue that may be surrounded by a fibrous capsule. Diagnosis is based on clinical and radiographic evidence and is confirmed with cytopathological analysis. Lipomas tend to exhibit slow growth, are often asymptomatic, and on examination are generally well-circumscribed soft lesions. Radiographic imaging— particularly computed tomography (CT) and magnetic resonance imaging (MRI)—can be suggestive of this diagnosis. Lipomas of the parotid gland are rare. The medical literature reports that they comprise 0.5% to 4.4% of all parotid masses. Anterior neck is a rare location for head and neck lipoma [3]. Surgical intervention is challenging especially when they are in deep neck space and should be reserved for patients with cosmetic concern and pressure effects. Lipomas of the parotid gland are also rare. Here we present two cases of lipomas in deep neck space.

CASE REPORT:

CASE 1-

A fifty-three year old male patient presented to the ENT opd with swelling in the left side of neck of size 10x6 cm noticed since 4 years (Fig.1). The growth in size of the swelling was slow and it was asymptomatic. On contrast enhanced CT, a well-defined non-enhancing fat density (-85 to -95 Hounsfield units) mass measuring 12.5cmx6.3cmx3.5cm with few internal fibrous septations suggesting lipoma was noted in left anterior triangle. Diagnosis confirmed by FNAC. The mass was excised using a horizontal skin crease incision under general anaesthesia (Fig.2). Intra operatively it was lying anterior to the carotid sheath and was carefully dissected from the internal jugular vein (Fig.3). No drain was used as there was minimal bleeding during the procedure. Patient was discharged on 3rd post-operative day. The specimen was sent for histopathology which confirmed the diagnosis.

Fig 1: Swelling in the left anterior triangle of neck

Fig 2 horizontal skin crease incision placed over the neck swelling

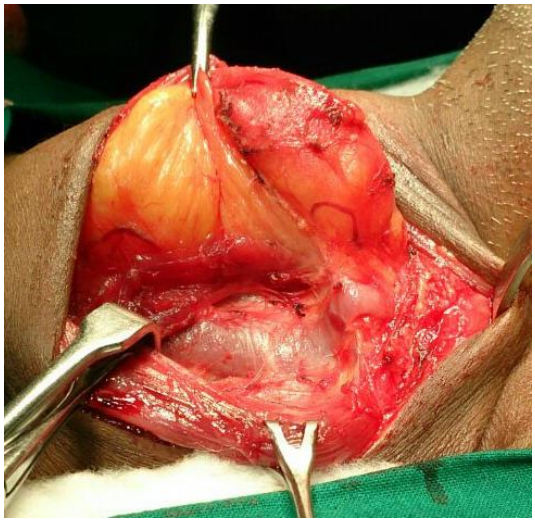

Fig 3 swelling dissected away from internal jugular vein

CASE 2-

A fifty-five year old female patient presented to the ENT opd with swelling in the right parotid region noticed since 6 years (Fig.4). It was a soft, non-tender swelling of size 5x6 cm otherwise asymptomatic. An ultrasonography of the parotid gland revealed an elliptical mass parallel to the skin surface that is hypoechoic and that contains linear echogenic lines at right angles to the ultrasound beam involving the whole deep lobe of parotid. FNAC was done to rule out parotid malignancy. Final diagnosis of lipoma of deep lobe of parotid gland was made. Modified blair incision was used to approach the lesion (Fig.5). Facial nerve trunk was identified and it was carefully dissected free from superficial lobe of parotid gland as well as lipoma lying deeper to facial nerve (Fig.6, 7). Lesion was completely removed and superficial lobe of the parotid gland was preserved. Wound was closed in layers and drain was used. Post operatively facial nerve functions were intact. Drain was removed on 4thpost-operative day and patient was discharged one day later. Histopathology of excised lesion confirmed the diagnosis of lipoma.

Fig 4 swelling in the right parotid region

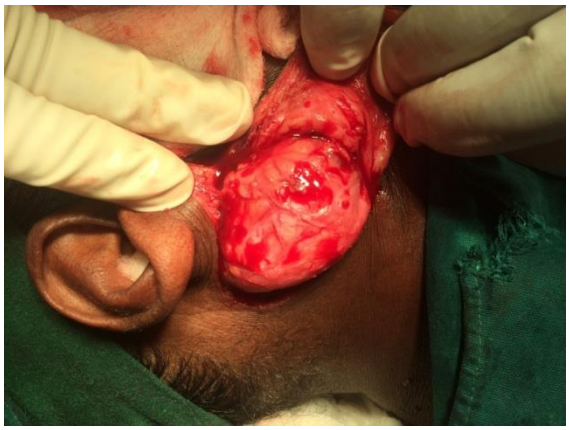

Fig 5 modified Blair incision used to expose the parotid

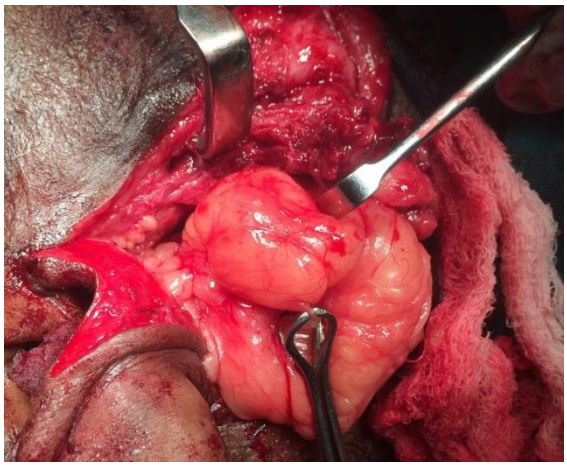

Fig 6 Swelling in the deep lobe of parotid seperated from facial nerve

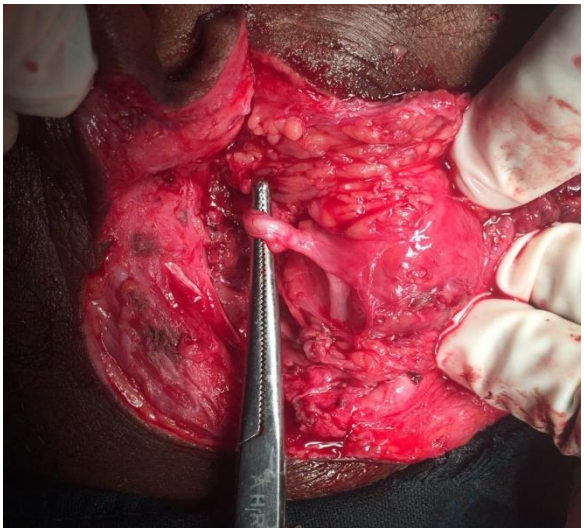

Fig 7: Facial nerve preserved with all its branches

DISCUSSION:

Lipoma is a most common benign mesenchymal tumour [4, 5]. It constitutes five percent of all benign tumour of body and can be found anywhere in the body [6]. Lipomain head and neck region are uncommon [7, 8]. Thirteen percent of lipomas are seen in head and neck region [9]. Anterior neck is an uncommon location for head and neck lipoma (3).Histopathologically lipoma is composed of mature adipose tissue surrounded by fibrous capsule [10]. Lipoma is seen in all age group though mostly seen in fifth and sixth decade [11]. Clinically, lipoma presents as painless, mobile, non-fluctuant swelling having rubbery consistency. Most of the patients are asymptomatic. Patient with neck lipoma extending to mediastinum may present with complaint of dyspnoea. Ultrasonography acts as the initial imaging modality in diagnosis of head and neck lipoma [12]. Sonographic appearance of head and neck lipomas is characteristic [12, 13]. In most cases, they are well defined, elliptical masses parallel to the skin surface and hyper echoic relative to the adjacent muscle. They typically have linear echoes at right angle to ultrasound beam and display no distal enhancement or attenuation [14].Computed tomography is modality of choice to confirm lipoma. Lipomas appear as homogenous low density areas with a CT value of -60 to -120 HU with no contrast enhancement [15].Few septations can be seen within lipoma in CT scan in some cases. Fine needle aspiration cytology or CT is indicated if the diagnosis is doubtful with the clinical impression or if the entire extent or outline of the lipoma is not delineated on the sonogram (12).On CT scans capsule of lipoma is barely visible or adjacent mass effect may be only clue to its presence [16].

Anterior neck lipomas in the subcutaneous plain are easy to manage and require simple excision but ones arising from deep neck space as presented here require carefully dissection and preservation of vital structures. Otherwise can lead to major complications such as vascular and cranial nerve injuries.

In the parotid gland and the periparotid area, at least 40 cases of lipomatous lesions have been reported [17-23], of which 57% were intraparotid and 43% arise in the region around this gland [18]. About 90% of the cases were ordinary lipomas and the rest were examples of diffuse fatty infiltration or lipomatosis of the parotid gland [20]. The discrete lipomas have a benign clinical presentation and are most often confused clinically with Warthin's tumors or pleomorphic adenomas. The lesions vary in size from 1 to 8 cm, are more common in females by a 10:1 ratio, and are not associated with lipomas elsewhere in the body [19]. Complete excision is curative. The differential diagnosis is again limited by the unique low attenuation of the lipoma. Branchial cleft cysts, cystic Warthin's tumors, and abscesses are conceivably in the differential diagnosis, but can be distinguished by the higher central attenuation, the presence of a rim, and associated clinical findings. Lipomas of parotid gland especially originating in deep lobe of parotid require careful identification and preservation of facial nerve and its branches. Surgeon may encounter difficulty in identifying main trunk of facial nerve as deep lobe lipoma may push the nerve superiorly. In our case nerve was identified 0.5 cm superior to tragal pointer. Surgeon should be prepared for such situations during the procedure

CONCLUSION:

We present two interesting and rare cases of head and neck lipomas and the role of imaging modalities like CT and ultrasound in their appropriate diagnosis and treatment. The most common presentations of these lesions were painless masses, with progression in size over time. FNAC was helpful in confirming the preoperative diagnosis. However, CT and ultarsound were particularly useful in identifying size, location. Imaging can assist in planning the extent of the surgery, particularly in parotid lesions that require extra capsular dissection and in case of anterior neck where the proximity of the lesion to the vital structures likes vagus nerve and internal jugular vein is important in planning the surgery. Treatment of benign lipomas is indicated for cosmetic purpose due to unpleasant physical appearance or when preoperative diagnosis is inconclusive. Intraparotid lipomas require standard parotidectomy procedures. Complications are rare and recurrences even more so.

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