



## GIANT ANTERIOR NECK LIPOMA WITH AIRWAY COMPROMISE – A RARE PRESENTATION

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**ABSTRACT** Lipoma is the most common benign mesenchymal tumor and it arises from adipocytes. Even though it is the most common swelling its presentation in head and neck region is very rare. Giant neck lipomas of neck impose more challenging task to attending physician and surgeons because of close proximity to great vessels and vital structures. Here we present a rare case of giant lipoma in the anterior neck having mediastinal extension and associated airway compromise.

**KEYWORDS :** Lipoma, Head And Neck, Mediastinum, Airway Compromise

### Introduction

Lipoma is a most common benign mesenchymal tumour.<sup>1,2</sup> It constitutes five percent of all benign tumors and can be found anywhere in the body.<sup>3</sup> Lipoma in head and neck region is rarely encountered.<sup>4,5</sup> Thirteen percent of lipomas are seen in head and neck region.<sup>6</sup> Amongst the head and neck lipoma, anterior neck with mediastinal extension is rare.<sup>7</sup> Giant lipomas are those measuring at least >10cm in one dimension or weighing at least 1000gm.<sup>8,9</sup> Here we present a case of giant lipoma in anterior triangle of neck with mediastinal extension and respiratory compromise.

### Case report

A 55 year old gentleman presented to Emergency Department(ED) with complaints of breathlessness from 1 month with sudden exacerbation. He also had complaints of neck swelling which started as a small swelling and gradually increased in size to present size during the last 3 years (figure 1). On presentation to ED patient was restless and tachypnoeic. His vitals on arrival to triage were pulse rate 96/min, blood pressure 130/70mm Hg, Spo2 at room air 84%, respiratory rate 38/min. He was triaged as Emergency Severity Index (ESI) class 2 and shifted to resuscitation bay for further treatment.

Patient kept in propped up position and supplemental oxygen provided through a face mask with reservoir at a rate of 15 lit/min. The patient was alert and able to vocalize. The patient was exposed and noted to have mildly dilated neck veins and upper limb veins. He had facial puffiness. Clinical examination of the respiratory system showed no abnormality. Blood pressure measured was 120/70 mm of HG and connected to defibrillator monitor. 12 lead ECG obtained which showed sinus tachycardia of rate 106/min. Intravenous access secured and blood samples for arterial blood gas analysis, haemoglobin and renal function tests sent. Blood glucose and temperature checked which were within normal limits. Then secondary assessment carried out.

There were no symptoms of hyper and hypothyroidism. He had complaints of respiratory difficulty in lying down position, relieved in an upright position. No history of chest pain, palpitations, pedal oedema, syncopal attack. There were no complaints of difficulty in swallowing or hoarseness of voice. No history of cough with expectoration. Not on any medications and no significant past illness. A solitary horizontally oval swelling of size 11 cm x 7cm was situated in left anterior triangle extending to the midline of the neck. Swelling had well-defined borders except for the inferior border. The plane of swelling was superficial to deep fascia of the neck. Left carotid pulsations were not palpable.

Thorough systematic examination of all systems performed and no significant findings noted. After resuscitation patient general condition

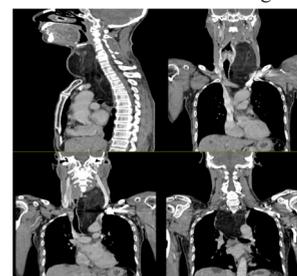
gradually improved over a period of 2 hours. Spo2 and respiratory rate came to 98% and 18/min respectively. Oxygen supplementation continued at 6lit/min.

He was further evaluated by X-ray chest (figure 1) and ultrasonography of neck which showed extension into the mediastinum. Fine needle aspiration cytology (FNAC) performed which confirmed it as a lipoma. Contrast-enhanced computerized tomography (CECT) head, neck and thorax showed large well-defined lobulated fat attenuating lesion of size 20 x 7 x 7 cm with internal soft tissue strands in the left side of the neck extending into the mediastinum (figure 2). The lesion was displacing the great vessels postero-laterally. No significant narrowing or filling defect noted. Medially the lesion was compressing the larynx, hypopharynx, cervical oesophagus, left lobe of thyroid and trachea and displacing them to the right. The trachea was severely narrowed at the T1-T2 level and displaced to the right. The lesion was extending into the mediastinum between the trachea and oesophagus and inferiorly reaching just below the carina.(figure 3)

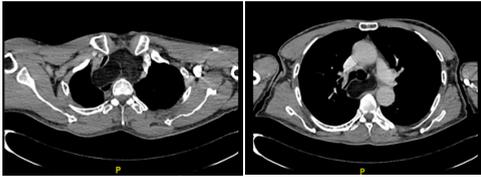
The patient was admitted and operated by cardiothoracic surgery department. Intraoperative frozen section showed lipoma without malignant changes and specimen sent for histopathological examination (HPE). Postoperative chest x-ray showed normalized tracheal shift. Postoperative period was uneventful.



**Fig 1 :** preoperative after stabilization in ED showing neck swelling which extending into mediastinum and chest X-ray showing mediastinal soft tissue shadows along with midline shift



**Fig 2 :** CECT neck lipoma with extension into mediastinum in sagittal and coronal reconstructions



**Fig 3 :** CT showing mediastinal lipoma with marked narrowing of trachea that deviated to right side and extending beyond bifurcation of trachea

### Discussion

Lipoma is a most common swelling and histologically composed of mature adipose tissue surrounded by a fibrous capsule.<sup>10</sup> Clinically, lipoma presents as painless, mobile, non-fluctuant swelling having a rubbery consistency. Most of the patients are asymptomatic. Patient with neck lipoma extending to mediastinum may present with a complaint of dyspnoea. Ultrasonography acts as the initial imaging modality in the diagnosis and is characteristic.<sup>11,12</sup> In most cases, they are well defined, elliptical masses parallel to the skin surface and hyperechoic relative to the adjacent muscle. Computed tomography can be done in some cases. Lipomas appear as homogenous low-density areas with a CT value of -60 to -120 HU with no contrast enhancement.<sup>13</sup> Fine needle aspiration cytology or CT is indicated if the diagnosis is doubtful on clinical examination or if the entire extent or outline of the lipoma is not delineated on the sonogram.<sup>11</sup> On CT scans capsule of lipoma is barely visible or adjacent mass effect may be only clue to its presence.<sup>14</sup> Regular follow up might be a valid option for asymptomatic patients with anterior neck lipomas. Surgical intervention is challenging and should be reserved for patients with cosmetic concern or pressure effects. Possible postoperative complications such as vascular injury, vagus nerve dysfunction, scar and asymmetric contour must be clearly explained to the patient before the operation is undertaken.

### Conclusion

Lipoma is a benign tumour that can occur in any location. But its occurrence in anterior triangle of the neck with mediastinal extension and associated airway compromise is a rare scenario. Approach to airway compromise should be addressed immediately and definitive management involves surgery. Proper evaluation needed prior to surgery. Surgery of neck lipomas with mediastinal extension is challenging due to the vital structures in this region. Chances of recurrence are more in case of incomplete removal and further surgeries will be difficult.

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### Disclosures

Authors have nothing to disclose.

### Informed Consent

Written informed consent was obtained from the patient for publication of his personal data.

### Conflict of Interest

There is no conflict of interest.

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