

**Case report**

**Giant Anterior Neck Lipoma in an Elderly: A Rare Differential Diagnosis**

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**Abstract**

Lipoma is a benign mesenchymal tumour of adipose tissue and relatively rare occurrence in head and neck area. Mostly lipoma have a diameter of 2 cm and rarely grow beyond 10 cm. However, it may occasionally enlarge rapidly and become huge to become a giant lipoma which measures at least more than 10 cm in one dimension or weighing at least 1000g. The presentation of the anterior neck swelling is mostly related to the thyroid gland. However, it also can be the other soft tissue swellings, such as lipoma, which is the commonest mesenchymal tumours in adults. The lipomas however, are commonly involving the head and posterior neck region, which estimate about 15-20% of the cases and mostly small. We present the case of a 80-year-old man with huge anterior neck swelling for thirty years. The complete excision was performed with a good post-operative healing and cosmesis.

**Keywords:** anterior neck; lipoma; giant

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**Introduction:**

The most common soft-tissue mesenchymal tumours are lipomas.<sup>1</sup> A thorough history and examination based on the aetiology, whether it is congenital or acquired, site, and the consistency of swelling, are crucial for the diagnosis. Lipomas twice as common in female compared to male elsewhere in the body. However, it has a balance gender distribution in head and neck region.<sup>1</sup> The histologic features and growth pattern of benign lipomatous tumour are subclassified into classic lipomas, fibrolipoma, angiolipoma, infiltrating lipoma, intramuscular lipoma, hibernoma, pleomorphic lipoma, lipoblastoma, and diffuse lipoblastoma.<sup>2</sup> The occurrence of these neoplasms are approximately 16% and may involve in all parts of the body.<sup>4</sup> However, in the head and neck, it is relatively rare.<sup>2,3</sup>

**Case presentation**

An 80-year-old male, presented with a painless, slow-growing anterior neck swelling for the past 30 years. There was no skin changes and has never been associated with infection. The swelling not causing obstructive symptoms such as difficulty in swallowing or breathing.

On examination, the patient was comfortable and not in respiratory distress. There was a single huge, lobulated anterior neck swelling extending from the lower border of thyroid cartilage to 3 cm below the suprasternal notch, and laterally from right border of the trachea to the left anterior border of sternocleidomastoid muscle, with the size of about 10 cm x 8 cm (Figure 1).

It did not move with swallowing or tongue protrusion. It was soft in consistency, non-tender, no overlying

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Figure 1 (a) and 1(b): The lobulated anterior neck swelling measuring 10cm x 8cm, as seen from anterior (A) and Lateral (B) Views.

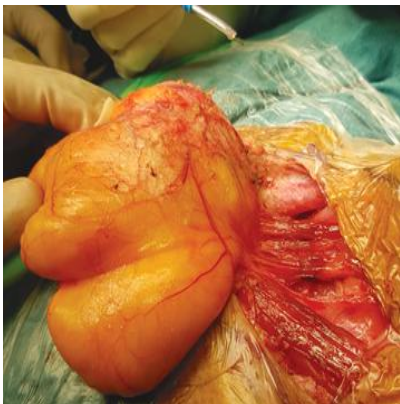


Figure 2: Intra-operative view of the neck lipoma.



Figure 3: Lipoma 12cm x 8cm fully excised.



Figure 4: The lipoma floats in the water.

skin changes, and the slippage sign was positive. The overlying skin was normal, and no cervical lymph node was palpable. Laryngoscopy was unremarkable. Fine needle aspiration cytology (FNAC) confirmed the swelling as a lipoma. Computed tomography (CT) scan was performed to look for depth-extension of the tumour. Subsequently, an excisional biopsy was performed under general anesthesia. Intra-operatively, there was a huge fatty mass of 12 cm x 8 cm (weighing 150g) with a very clear plane between the mass and underlying structures (Figure 2 and 3).

The mass was easily excised with very minimal bleeding. The mass floated in the water, the pathognomonic features of a benign lipomatous mass

(Figure 4). A vacuum drain inserted post-operatively to reduce the risk of hematoma. The patient was discharged well on day two post-surgery. The histopathology diagnosis confirmed the diagnosis of a benign lipoma. There was no recurrence after six months of follow up.

#### **Discussion**

Lipoma is a benign tumour of mesenchymal origin that can occur in any parts of the body. Occurrence in the head and neck region was estimated about 13% cases, and mostly located at the posterior neck.<sup>5</sup> In our case, the patient presented with anterior neck lipoma, which is a very rare location for a lipoma

to occur. Other than that, our patient also has a huge size of lipoma (intra-operative measurement 12 cm x 8 cm), which is considered as a giant lipoma. A giant lipoma are the lipomas with the size of greater than 10 cm in any dimension or weight over 1000g.<sup>6</sup>

Our patient presented with 30-year history of a slow growing anterior neck swelling, suggesting a benign neoplasm. In the case of a rapid growth, the suspicion of malignancy is suspected. Ultrasonography is still the first imaging modality preferred for diagnosis, while FNAC is useful for confirmation of diagnosis pre-operatively.<sup>6</sup> FNAC is an important pre-operative investigation as the differential diagnoses for an anterior neck swelling include thyroid lesion, dermoid cyst, thyroglossal cyst, and cervical lymphadenopathy.<sup>7</sup> Although the clinical examination is suggestive of a lipoma, it is crucial to have a pre-operative tissue diagnosis. However, the FNAC also has limitation in differentiating between atypical lipoma and well-differentiated liposarcoma.<sup>8</sup> About 65% cases of pleomorphic lipoma or giant cell lipoma is affecting predominantly elderly and middle age men. In cytomorphology, fragment of mature fat tissue and numerous dispersed, lobulated large hyperchromatic bizarre nuclei with stripped cytoplasm along with foamy macrophages are usually demonstrated.<sup>8</sup> It makes diagnosis difficult where foamy macrophages can mimic lipoblast, which is features of pleomorphic lipoma form a potential diagnostic pitfall.<sup>7</sup> The lesion for lipomas and liposarcoma can have a similar imaging and histologic appearance in differential consideration.<sup>9</sup> Approximately half of the lesion is well-differentiated liposarcoma, which is the most common subtype, also known as atypical lipomatous tumour. The lesion is found up to 75% within deep soft tissue of the extremities.<sup>9</sup> 20-33% of liposarcoma lesions are commonly found in deep-seated areas, in contrast to benign lipoma.<sup>9</sup>

Lipoma usually has a good plane with surrounding tissues. However, in the case of anterior neck lipoma, extra precaution is needed as it is close to major vessels such as carotid and internal jugular vein and other important structure like thyroid gland and recurrent laryngeal nerve. Meticulous surgical skill is important for complete excision at the same time avoiding complications.<sup>6</sup>

Well-differentiated liposarcomas and simple lipomas

is important to be distinguished preoperatively due to differences in treatment, prognosis and long term follow up. Imaging also play important role to establish diagnosis. In the case of a huge anterior neck mass, CT scan or MRI is a preferred tool for imaging than ultrasound, which can give a better information regarding relationship of the tumour from the surrounding vital structures prior to surgery. CT scan also can give an additional information regarding the adjacent trachea to suggest any related airway compression. MRI however, is the modality of choice for lipomas because it is highly sensitive (100%) and highly specific (83%) to distinguish between simple lipomas or well-differentiated liposarcomas.<sup>3,10</sup>

A well-differentiated liposarcoma often present as a painless, slow growing mass and predominantly in middle age.<sup>10</sup> An “atypical lipoma” and “atypical intramuscular lipoma” terms were introduce for well-differentiated liposarcomas to indicate the relative benign course when occurring in the extremity compare to their retroperitoneal parts because The lesion is site-dependent differences in the behaviour.<sup>10</sup> They do not metastasize despite having high local recurrence rate and a well-documented potential for delayed differentiation into high-grade sarcomas.<sup>10</sup>

### **Conclusion**

The giant anterior neck lipoma is rare. The huge size of anterior neck lipoma rarely cause compression to the adjacent area; however, it gives a surgical challenge due to close vital structure. Thorough examination, cytopathology investigation and imaging are crucial prior to surgery to reduce risk of morbidity due to complication of surgery and give good surgical outcome in managing the patient upon follow up.

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**Authors' contribution:**

Data gathering and idea owner of this study: MSAI, NSMU, IM

Study design: NSMU, IM

Data gathering: MSAI, NSMU

Writing and submitting manuscript: MSAI, NSMU, IM

Editing and approval of final draft: IM

**References:**

1. Alshadwi A, Nadershah M, Salama A, Bayoumi A. Giant Deep Neck Lipoma: A Case Report and Review of the Literature. *Clinics In Surgery*. 2017;**2**:1299.
  2. Salvatore C, Antonio B, Del Vecchio W, Lanza A, Tartaro G, Giuseppe C. Giant Infiltrating Lipoma of the Face: CT and MR Imaging Findings. *American Journal of Neuroradiology*. 2003;**24**(2):283-6.
  3. Mohamad A, Yusuf S, Mohamad I. Intramuscular Hemangioliipoma of the Masseter. *International Journal of Human and Health Sciences* 2017;**1**(2):86-8. <https://doi.org/10.31344/ijhhs.v1i2.16>
  4. Pélissier A, Sawaf MH, Shabana A-HM. Infiltrating (Intramuscular) Benign Lipoma of The Head and Neck. *Journal of Oral and Maxillofacial Surgery*. 1991;**49**(11):1231-6. [https://doi.org/10.1016/0278-2391\(91\)90425-L](https://doi.org/10.1016/0278-2391(91)90425-L)
  5. Jain G, Tyagi I, Pant L, Nargotra N. Giant Anterior Neck Lipoma with Bleeding Pressure Ulcer In An Elderly Man: A Rare Entity. *World Journal of Plastic Surgery*. 2017;**6**(3):365-8.
  6. Gowri Sankar M, Manu C, Alexander A. Giant Lipoma Anterior Neck: A Case Report. *Archives of CaseReport*.2017;**1**:006-8. <https://doi.org/10.29328/journal.hjcr.1001003>
  7. Misron K, Mohamad I, Jaafar H, Hamdan AH. Anterior Neck Swelling: A Differential Diagnosis. *International Medical Journal*. 2015;**22**(3):178-80.
  8. AravindP, Sandhya I. Pleomorphic Lipoma: A Cytological Diagnostic Dilemma. *Journal of Clinical and Diagnostic Research*. 2011;**5**(2):355-6.
  9. Burt AM, Huang BK. Imaging Review of Lipomatous Musculoskeletal Lesions. *SICOT-J*. 2017;**3**:34. <https://doi.org/10.1051/sicotj/2017015>
  10. Gaskin CM, Helms CA. Lipomas, Lipoma Variants, And Well-Differentiated Liposarcomas (Atypical Lipomas): Results of MRI Evaluations of 126 Consecutive Fatty Masses. *American Journal of Roentgenology*. 2004;**182**(3):733-9. <https://doi.org/10.2214/ajr.182.3.1820733>
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