

CASE REPORT

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Giant anterior triangle neck lipoma with unusual extension: a case report

Mohamed S. Rashwan^{1,2*} and Mohammed T. El Tabbakh¹

Abstract

Background Lipomas are considered to be the most common benign mesenchymal neoplasm which can originate from any fatty tissue. Only 13% of lipomas are present in the head and neck region where the posterior triangle of the neck is the most common site.

Case presentation Giant lipomas > 10 cm involving the anterior triangle of the neck with para- and retropharyngeal extension are rarely seen. We report a 59-year-old male patient with giant anterior neck space lipoma 13 × 7.5 × 3.5 cm with medial extension to the retropharyngeal space which was surgically excised.

Conclusions Giant anterior neck lipomas are very challenging in excision compared to posterior neck ones. ENT surgeons should keep lipomas in mind when dealing with anterior neck lesions. Complete surgical excision is the best treatment modality.

Level of evidence 4

Keywords Lipoma, Anterior neck space, Giant lipoma

Background

Lipomas are benign slowly growing tumors of mesenchymal origin that can be seen anywhere in the body where fat cells are present; they are composed of mature fat cells mostly seen in the back, shoulder, and abdomen. The head and neck region involve only 13% of lipomas usually sited in the posterior triangle of the neck [1, 2].

They present as slowly growing painless masses with intact overlying skin, and the clinical presentation depends on the size, site, and rate of growth of the mass [3].

Surgical excision is considered the best treatment modality, usually performed for cosmetic reasons

especially since they are usually well circumscribed with the least rate of recurrence. Other cases can be managed by watchful waiting or liposuction. Anterior triangle neck lipomas are considered challenging because of the close relation to the carotid sheath with its great vessels and vagus nerve in addition to the spinal accessory nerve as in our case [4].

Case presentation

A 59-year-old male with no history of chronic illness, working as a clerk at the university, presented with a complaint of a longstanding right-sided neck swelling.

The mass was first noticed 3 years ago on the right side of his neck by his relatives; it was small in size but became more obvious while moving his head. The mass grew bigger in size in the last year till the last 2 months when it became about 11 cm × 6 cm (Fig. 1).

The patient complained of mild dysphagia, with no hoarseness of voice or difficulty of breathing.

On general examination, the patient was alert; was consciously oriented to time, place, and person; and have a Glasgow Coma Scale (GCS) of 15/15. Soft mild

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Fig. 1 Right neck mass about 11 cm × 6 cm

inspiratory stridor was noticed, with no hoarseness or respiratory distress.

Neck examination showed right-sided neck swelling extending from the level of the angle of the mandible superiorly to the clavicle inferiorly, oval in shape about 11 cm × 6 cm. There are no palpable lymph nodes, and the mass was soft in consistency and smooth with a slippery surface and has no surface ulceration or overlying skin infection. A cranial nerve examination revealed no cranial nerve affection.

Oropharyngeal examination showed right-sided pushing at the oropharyngeal level which seemed to extend from the right parapharyngeal space to involve the retropharyngeal space with evident anterior displacement of the posterior pharyngeal wall.

Flexible nasopharyngolaryngoscopy showed the retropharyngeal pushing more on the right side at the oropharyngeal level obscuring the laryngeal view which was clear after bypassing the swelling revealing bilateral freely mobile vocal cords with intact mucosa.

Neck magnetic resonance imaging (MRI) with contrast was done showing a hyperintense mass in T1 and T2. The mass measured 7.8 × 3.2 × 12.4 cm, filling the right parapharyngeal space extending medially to involve the retropharyngeal space displacing the carotid sheath anterolaterally. Antero-medial displacement of

the oropharyngeal mucosa with encroachment upon the oropharyngeal airway was seen extending from the skull base superiorly to the root of the neck and Kronig's isthmus inferiorly (Fig. 2).

Intra-operatively, a right Hockey stick incision was made extending from the mastoid process to the level of the cricoid cartilage inferiorly; there were elevation of the sub-platysmal flap, exposure of the right sternomastoid muscle with special care to the spinal accessory nerve and dissection of the anterior tunnel showing the mass displacing the carotid sheath and its contents anterolaterally, dissection of the internal jugular vein (IJV), common carotid artery (CCA), and vagus nerve from the anterior surface of the mass (Fig. 3), blunt dissection of the pharynx from the medial surface of the mass, and separation of the mass from the skull base superiorly down to the root of the neck; the suction drain was inserted; and the skin incision was closed in layers. Oropharyngeal examination revealed intact pharyngeal mucosa with no retropharyngeal pushing any more. Excisional biopsy and histopathology revealed a 13 × 7.5 × 3.5 cm neck lipoma (Fig. 4).

Discussion

Lipomas are a type of subcutaneous tumors made up of adipose (fat) cells that are usually encased in a thin layer of fibrous tissue [5]. These are, in fact, the most commonly encountered neoplasms by clinicians [6]. They are most commonly seen between 40 and 60 years of age [7].

However, they are less common in other areas, such as the thighs, and lipomas are usually found in the subcutaneous tissues. While the age of onset can vary, the tumors are usually benign. In the majority of the time, there is no justification for treatment. They do not constitute a concern to the patient unless they are causing discomfort due to their location on joints or their rapid movement in addition to nerve compression.

Lipomas are benign tumors that represent 5% of all benign tumors in the body and can be found anywhere. The posterior neck area is the most prevalent site in the head and neck region, where only 13% of lipomas are found [3], but the anterior neck space is uncommon [7]. In our case, the lipoma involved the anterior neck space pushing the carotid sheath with its important structures in an anterolateral direction.

Lipomas are usually painless soft tissue masses, well defined and encapsulated, slowly growing, and mobile. These features were typically noticed in our case which were reassuring to a great extent that we were dealing with a neck lipoma.

Sanchez et al. described giant lipomas as being at least more than 10 cm in one dimension or weighing more

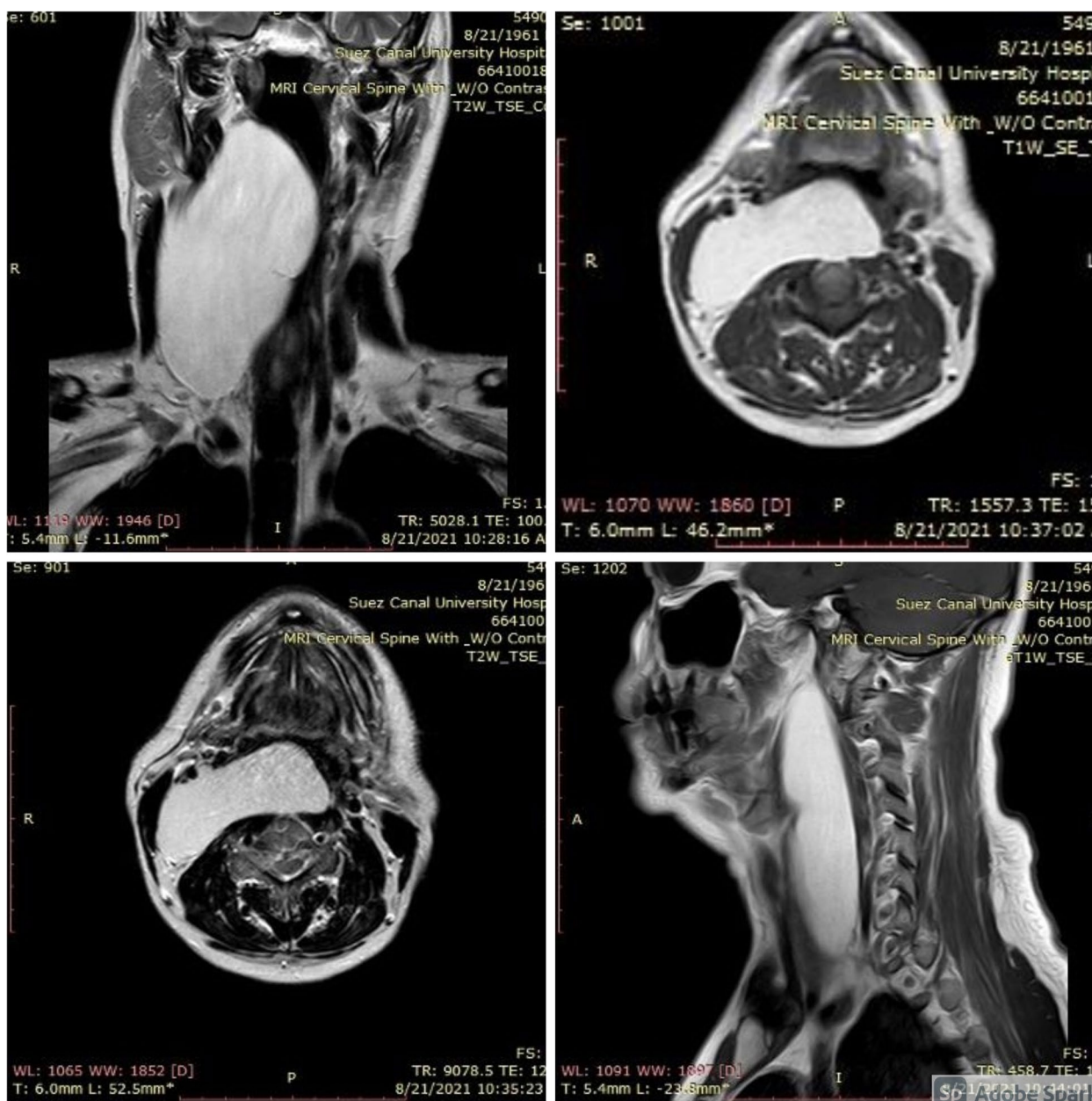


Fig. 2 MRI neck showing antero-medial displacement of the oropharyngeal mucosa with encroachment upon the oropharyngeal airway

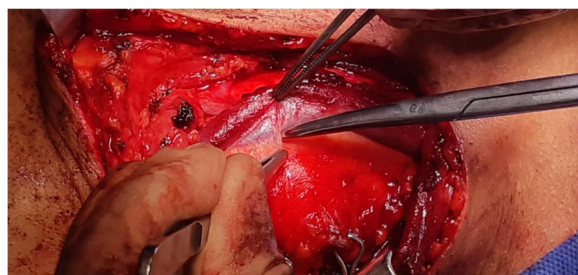


Fig. 3 Dissection of the internal jugular vein (IJV), common carotid artery (CCA), and vagus nerve from the anterior surface of the mass

than 1000 g. Rapid growth and increasing pain should raise the suspicion for possible malignancy [8].

Multiple lipomatosis, Gardner’s syndrome, Dercum’s illness, and Madelung’s disease are some of the syndromes related with lipomas. Lipomas are histologically described as being composed of mature adipose tissue, and they are usually solitary as in our case but can be multiple as in the abovementioned syndromes [9].

Diagnosis can be initially performed by using ultrasound, while definitive diagnosis will be obtained

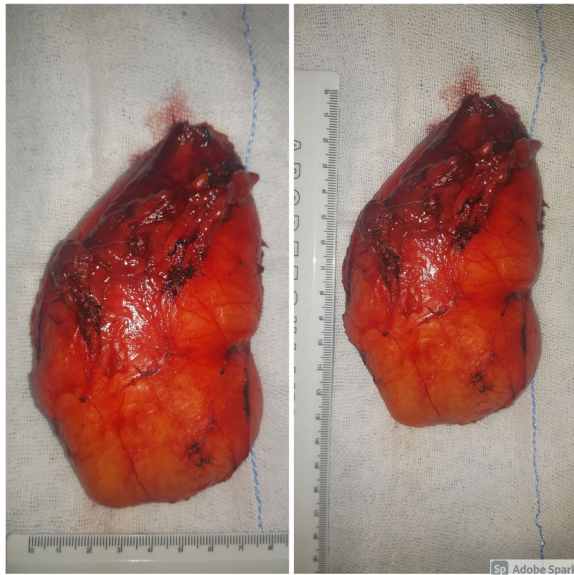


Fig. 4 Excisional biopsy and histopathology revealing a 13 × 7.5 × 3.5 cm neck lipoma

using fine needle aspiration cytology (FNAC), computed tomography (CT), and MRI. The lipomas have well-defined boundaries on MRI and homogeneous fat signal intensity across all sequences. They have a distinct “black rim” that distinguishes them from the surrounding fat [10].

Surgical excision remains the best treatment modality for these lesions, and the surgery was quite challenging in our case due to the relation to the carotid sheath with great vessels and vagus nerves being stretched over the anterolateral surface of the mass extending from the skull base superiorly down to the lower neck. Another critical step was the dissection of the mass medially from the retropharyngeal space with great caution not to injure the pharynx leading to a possible pharyngocutaneous fistula. The lateral relation to the sternocleidomastoid muscle and the spinal accessory nerve was another very challenging step to be done carefully. Great care was given to define the capsule and follow carefully during dissection for complete removal and to avoid recurrence. Liposuction can be sometimes an option for some lesions like those face and forehead lipomas to avoid scarring, but high recurrence rates were reported. Another treatment modality is to inject steroids especially for small lipomas, but several injections may be needed with possible overlying skin pigmentation [4].

Conclusion

Giant anterior neck lipomas are very challenging in excision compared to posterior neck ones. ENT surgeons should keep lipomas in mind when dealing with anterior neck lesions. Complete surgical excision is the best treatment modality.

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Authors’ contributions

MR analyzed and interpreted the patient data, performed the surgical removal, and wrote the manuscript. ME had a major role in the surgical planning and removal of the lipoma. The authors read and approved the final manuscript.

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All data generated or analyzed during this study are included in this published article.

Declarations

Ethics approval and consent to participate

Faculty of Medicine, Suez Canal University. Informed written consent to participate was obtained from the participant.

Consent for publication

Written consent for publication was obtained from the patient.

Competing interests

The authors declare that they have no competing interests.

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