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Huge Lipoma at the Posterior Triangle of the Left Neck

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Case Report

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Abstract:

Lipomas are slow-increasing benign soft-tissue tumors, commonly without clinical features. Lipomas are recorded in 1-2% of the population and make up almost half of the soft tissue tumors. Intramuscular lipomas account for 0% - 50% of all adipose tissue tumors. A huge lipoma is defined if it is more than 10 cm in length or weighs more than 1 kg. Lipomas are found in the head and neck area in 13%. Huge lipomas are rare and benign of painless neck masses. Operative excision assures the confirmation of lipomatous tumor and results in full resolution of neurological clinical features.

Key Words: lipoma, huge, neck, posterior, neck.

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INTRODUCTION

Lipomas are slow-increasing benign soft-tissue tumors, commonly without clinical features and are recorded in 1-2% of the population [(1)]. Lipomas make up almost half of the soft tissue tumors [(1)]. Intramuscular lipomas account for 0% - 50% of all adipose tissue tumors. Lipomas are small and solitary lesions and may grow in any part of the body if adipose tissue is found. Most of lipomas grow on the limbs and trunk but only 13% are found on the neck and the head [(3-4)].The tissue in a lipoma is a mature adipose one found in septated lobules within a fibrous connective tissue. A lipoma is huge if it is more than 10 cm in length or weighs more than 1kg [(2-5)].
We discuss a 47 years old female case presenting with a huge posterior neck mass at left side of her neck.

CASE

47-years old female patient presented to the outpatient surgical clinic at Queen Alia military hospital, JRMS, Amman, JORDAN, on September 2023, with the main complaint of painless discomfort induced by a huge posterior neck mass at the left side of her neck for 12 years duration. The mass was small in size when it appeared firstly then started to increase in size till 4 years ago when it stopped to grow up in size and she can no more completely extend her neck or fully turn her head. There are paresthesia in her fingers in both hands which started 7 days before the presentation. The lipoma prevented the patient's capability to look directly up without turning her head sideward. The reduced scale of movement and paresthesia have become worse and clinical features became aggravated by any movement of her head or neck. There is no history of trauma. She had neither dysphagia nor breathing difficulty. There were no correlated constitutional clinical features and the patient had no comorbidities. Headaches were found commonly.

Physical exam showed a well-being female (BMI = 30).There was no lymphadenopathy and neither cranial nerve pathologies. A huge posterior neck mass was seen. The mass was doughy, mobile and compressible with no signs of infection.Fig.I. The patient had no posterior neck tenderness on palpation but with reduced scale of motion in the neck—mostly to extension. There is no tracheal deviation and the mass was non-pulsatile. The patient experienced 5 over 5 strength in her arms and hands but reduced sensation in her both hands. She experienced neurological clinical features as intermittent paresthesia in the C7-T1 dermatomes. Laboratory results were normal. Flexible nasopharyngolaryngoscopy

showed no changes as was the rest of the head and neck examination. The mass was superficial to the cervical spine, spinal canal, and the paravertebral muscles with no calcification, internal bleeding or inflammation.

MRI showed a huge neck mass of the deep cervical fascia of the whole left posterior triangle with remarkable mass effect of both the sternocleidomastoid and trapezius muscles. There was no correlated lymphadenopathy and the mass spread into the prevertebral fascia and beyond the clavicle. Suspicion of mass invading into the paraspinal area of the cervical spine indicated MRI of the neck. The MRI demonstrated a well-circumscribed smooth encapsulated fat-containing huge lesion of the posterior neck of 20 cm × 25 cm lipomatous (lipoma) mass originating from the lower border of left posterior triangle of the neck, with no overlying skin modifications. Fig.II-V. The shape was compatible with lipoma. Figure- VI.

The differential confirmation enrolled lipo-sarcoma or cyst. Differential diagnosis for huge neck lumps include lymphadenopathy (benign or malignant), lymphangioma, branchial cleft cyst and benign or malignant thyroid masses. Spindle-cell lipomas are small (less than 2.5 cm) and are found in the posterior neck or upper back of old males, and were found also in unusual locations (larynx, orbit, hypopharynx).

Complete excision was done on October 2023 under general anesthesia with preservation of the muscles, brachial plexus, external jugular vein and the subclavian artery. The patient had left neck dissection and excision of the mass. During surgery, the mass was soft, friable and well-encapsulated, spreading into the prevertebral plane and near the paravertebral muscles and brachial plexus. The accessory nerve, at risk during entry into the posterior triangle, was recognized and preserved. The nerve was distorted and superficial, as this is a frequent problem in surgery of this area.Fig.VII-VIII. Closure was performed with drain in situ. Excess skin was removed and primary closure was done. Figure- IX.

The patient did fine and was discharged after 2 days with preservation of all motor and sensory functions of the neck, shoulder and face.
The patient came after 3 weeks for follow up and she was very happy with the result. Plastic reconstruction was not needed.

After surgery, the patient had no neurological deficit and was discharged. The mass weighed 1.8kg. Histopathology showed atypical lipomatous tumor. Histology of the mass confirmed no malignant features.

Figure I: Preoperative huge mass spreading beyond clavicle (Left sternocleidomastoid)

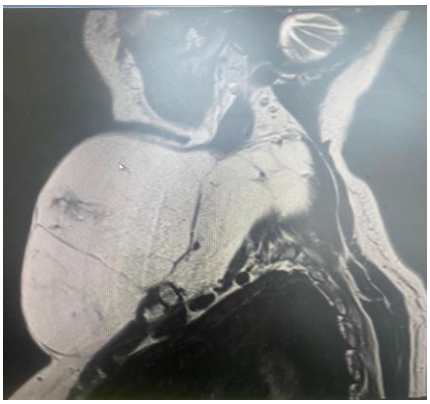

Figure II: MRI of left posterior triangle mass

Figure III: MRI of left posterior triangle mass

Figure IV: MRI of left posterior triangle mass

Figure V: MRI of left posterior triangle mass

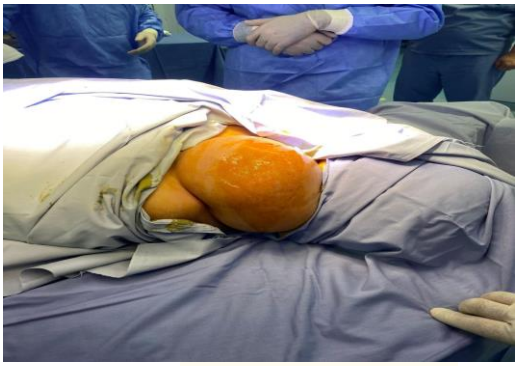

Figure VI: Preoperative huge mass

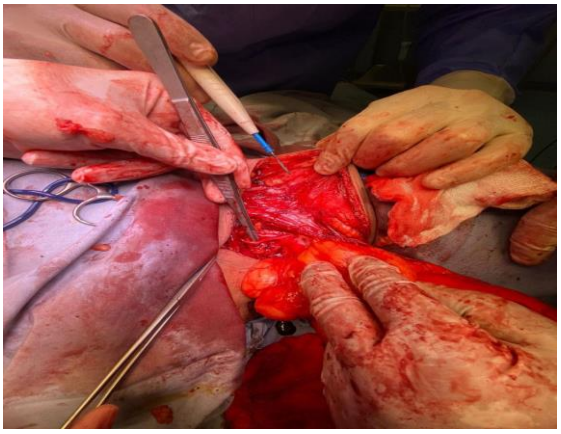

Figure VII: Superficial and displaced location of accessory nerve

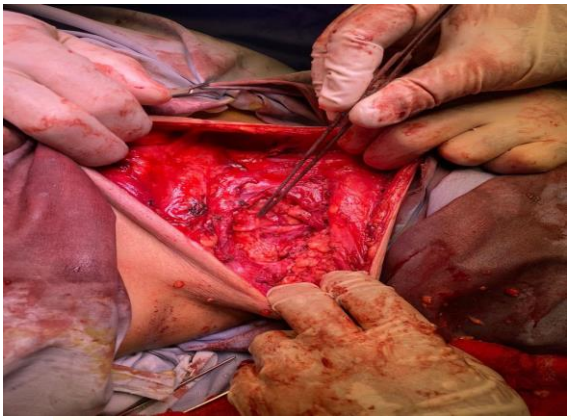

Figure VIII: Superficial and displaced location of accessory nerve

Figure IX: Primary closure of the wound

DISCUSSION

The patient had a huge lipoma of the posterior left neck. There are few case reports of a huge lipoma compared to mass of the posterior neck [2, 4]. There are risks of a huge lipoma in the setting of airway management. A huge mass may prevent neck extension and obstruct the larynx. Our patient had no airway involvement, but such patient with a huge lipoma of the posterior neck might require preparation for a difficult airway. The discrepancies between lipoma and liposarcoma showed that there are indications that might make a liposarcoma more likely such as calcifications, size more than 10 cm, and irregularly, thickened septate [6]. Our patient had none of these findings on MRI but had a remarkable reduction in neck extension and inability to raise head more than 30 degrees. The patient had no clinical features with reduced scale of motion.

Huge lipomas are rare, especially in the posterior neck, and the mechanism of such growth is suggested to be trauma [7]. Histopathological differentiation is the corner stone between malignant changes and a benign lipoma, and is found most frequently in locations of delayed presentation and confirmation, such as the retroperitoneum.

Management of such lesions includes operative excision with cross-sectional imaging before surgery, and if possible core biopsy or fine-needle aspiration cytology. Because of the encapsulated nature of lipomas, blunt dissection with preservation of surrounding structures is required. Normal structures may be displaced (accessory nerve), more prominent (internal jugular vein) and at risk (Brachial plexus, phrenic nerve).

CONCLUSION

The differential confirmation of a huge posterior neck mass is wide with consequences. The confirmation of huge lipoma is by exclusion. Advanced imaging is needed to differentiate lipoma from liposarcoma. Huge lipoma is a rare cause of a painless neck mass. The key differential is well-differentiated liposarcoma. Management is commonly surgical excision, but with care to avoid key anatomical structures, which may be grossly displaced.

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