

Submental Lipoma-Clinical Report of the Case and Review of the Literature.

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ABSTRACT

Lipomas is the commonest tumour of subcutaneous tissue. It may occur anywhere in the body, but are very infrequent in the head and neck. Clinically they confuse with other soft tissue masses, especially if the present in the head and neck region. Malignancy has to be ruled out if the large neck swelling with increased rapid recent growth. Improved diagnostic imaging technology (such as CT or MRI) has been very beneficial for the knowledge of extension and surgical plan of the tumour mass. The best treatment modality so far has been surgical excision. In this present study, a 45-year-old woman who presented with a enlarged submental mass which was present since 2 months but has started growing rapidly since 15 days is described. Surgical excision under bilateral cervical block was performed. A 7cm x4cm mass was successfully removed. The surgery produced no functional impairment and good cosmetic results. Review of literature is also included.

Keywords: Lipoma, Submental Swelling, Mass, Neck swelling, Superficial Cervical block anesthesia.

INTRODUCTION

Lipomas rarely occur in the head and neck. A rapidly growing neck mass indicates a possible malignancy.^[1] In this case, A 45-year-old woman who presented with a rapidly enlarging submental mass.

Distinguishing a lipoma from a well-differentiated liposarcoma, however, can represent a unique challenge, but it is highly important due to differences in treatment, prognosis and follow-up.^[4,8]

It is known that lipomas are one of the most common mesenchymal tumours.^[2,7] Failure to distinguish a benign lipoma from a liposarcoma may represent a potential pitfall.^[8]

(MRI), can provide adjunctive information in the diagnosis of the mass.^[5,6] Lipomas are pathologically distinctive both grossly and microscopically, being composed of a collection of solitary vacuole fat cells.^[9] Liposarcomas generally arise as painless masses in the lower extremities or the retroperitoneum, and can be exceptionally large.^[3,9] Surgical excision is the most commonest treatment for lipomas. Other treatment modalities like liposuction^[10-14], steroid injections^[15] have also been reported. Liposuction is preferred to excision because it causes less scarring.^[13,14] The rate of reoccurrence is higher when compared with excision. Steroid injections causes depigmentation and painful due to repeated several injections.

This is a clinical report of a case of submental lipoma and review of literature.

CASE REPORT

A 45-year-old female presented to the ENT out patient department, complaining of enlargement of a neck mass. It had been present for over 2 months, but had enlarged rapidly over the past few days. The patient had no pain, fever, trauma or weight loss associated with mass. Patient was known epileptic on medications, she had last episode of seizure 4 years back. General physician suggested for Plain CT brain which showed CVA with old cerebral lacunar infarct. Vital signs demonstrated that the patient was afebrile and hemodynamically stable.

Lipomas may be located in all parts of the body and may be classified as superficial or deep based on the site of origin.^[9] Gathering information from the medical history and physical examination may narrow the differential diagnosis. Information about rate of growth, size, location, consistency and attachment to adjacent tissues is essential for differentiating benign from malignant masses.^[1] Diagnostic imaging, including computed tomography (CT) or magnetic resonance imaging

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The patient's height was 168 cm, and her weight on admission was 70 kgs.

On Physical examination, an approximately 7 cm, soft mobile mass located in the subcutaneous tissue of the submental area was noticed [Figure 1]. She had no lymphadenopathy or other palpable masses, and her oro-pharynx was normal. There was no apparent facial nerve deficit. Pertinent laboratory data included a white blood cell count of 9,200/cu.mm, hemoglobin 12.9 gm%, platelet count of 2 lakh/cu.mm and a creatinine of 1.1 mg/dl.

The mass appeared benign in origin because it was a soft, mobile, subcutaneous mass present for 2 months. Its location in the neck and recent increased rate of growth raised concern for a malignant etiology. An USG scan of the neck was done which suggested? neoplasm or infected cyst [Figure 2]. FNAC was done for further evaluation which suggested features of Degenerative cystic lesion. The mass was well-circumscribed and located in the submental area without evidence of invasion of adjacent structures. CT scan was done, the signal intensity of the mass in the CT was homogeneous without internal septations or nodularity. The density of the mass on the CT suggested that the majority of the tumour was composed of fat. Risks and benefits of surgical excision were discussed with the patient at length. Surgical excision of the tumour was recommended to the patient, because the possibility of a malignancy was present in the differential diagnosis.



Figure 1: An out-patient department photograph of the patient's submental mass.



Figure 2: Ultrasonogram neck.

Pre operative risk factors were 1) Known epileptic patient. 2) CVA with old cerebral lacunar infarct. 3) Mild hypertension as evidenced by thyroid function tests. In view of the above co- morbid conditions anesthesia plan was bilateral superficial cervical plexus block.

After cervical block anesthesia was induced, Patient was kept in rose position. A midline collar incision was given. Flaps were elevated, circumscribed mass measuring about 7cm x 4cm over the strap muscles was dissected and removed in- toto. Hemostasis was achieved with electrocautery. The incision was closed in layers. Minimal bleeding was maintained throughout the procedure, no drain was placed. Pressure bandage done around the neck. Post operative recovery was uneventful.



Figure 3: Intraoperative photograph of the patient's neck after excision of the mass in its entirety.

Pathological examination revealed a 7cm× 4cm single grayish white and yellowish soft and smooth mass. Microscopic appearance showed lobules of benign adipocytes traversed by thin capillary blood vessels. Focal stromal fibrosis was seen. The final pathological diagnosis was lipoma. The patient was seen at one and three weeks postoperatively with

excellent cosmetic results and no functional impairment. At 1 year postoperatively she has no evidence of recurrence.

DISCUSSION

Lipomas rarely occur in the head and neck.^[2] Of those lipomas that occur in the head and neck region, the most common location is the posterior neck. Lipomas make up approximately 5% of all benign tumours of the body, and they may occur anywhere on the surface of the body.^[17] Most lipomas are less than 5 cm but there are reports of giant lipomas of more than 20 cm.^[9] This is most likely an underestimation because these lesions are generally brought to the attention of a physician after they become cosmetically displeasing, cause pain or impair function.^[15,16] Lipomas are the most common mesenchymal tumours of adulthood. Malignant degeneration to liposarcomas has been rarely reported in the literature.^[8] A peak incidence of lipoma formation is noted in the fifth and sixth decades of life, and lipomas are more common in obese individuals.^[14] An annual incidence of one per 1000 persons is estimated. Solitary lesions are most common (80%), especially in women. Multiple lipomas (lipomatosis) are more common in men.^[8] Common locations for lipomas are the back, arm, shoulder, anterior chest wall, breast, thigh, abdominal wall, legs, forehead and face, in decreasing order of frequency.^[18]

Lipomas are classified into conventional lipomas, angiolipomas, fibrolipomas, spindle cell lipomas, pleomorphic lipomas, hibernomas, myelolipomas and atypical lipomas depending on their microscopic appearance.^[19] In some instances, lipomas infiltrate into adjacent muscle and are termed infiltrating lipomas.^[15] A new variant of lipoma, termed adenolipoma, is characterized by the presence of eccrine sweat glands throughout the tumour and is usually found on the proximal extremities.^[20]

In most cases, however, there is usually no history of familial occurrence, and there is no evidence to support any type of genetic transmission.^[17,18] Lipomas appear to be associated with trauma, but it has not been determined whether the trauma causes the tumour or if the discovery of the tumour is incidental.^[19] Lipomas are composed of physiologically distinct mature adipocytes; its lipids are not available for metabolic utilization. This, along with their autonomous growth, allows their classification as a benign neoplasm. Differentiating a lipoma from a well-differentiated liposarcoma may represent a challenge for the pathologist. The absence of vacuoles in the irregularly shaped nuclei and increased size of the cells are some of the characteristics that may guide the pathologist toward the diagnosis of a well-differentiated liposarcoma. Conventional lipomas have characteristic chromosomal abnormalities. For example,

conventional lipomas often show chromosomal rearrangements of 12q14–15, 6p and 13q.9^[15,16] Clinical features vary greatly depending upon the lesion's size, location and rate of growth. In most cases, these benign tumours present as painless, mobile, palpable masses, which are well circumscribed and are often overlooked by patients until the mass increases appreciably in size. They are nonfluctuant, have a rubbery consistency and may be associated with syndromes including hereditary multiple lipomatosis (lipomas over the extremities and trunk)^[16], Gardner's syndrome (associated with intestinal polyposis, cysts and osteomas), Madelung's disease (lipomatosis of the head, neck, shoulders and proximal upper extremities) and Dercum's disease (multiple painful subcutaneous lipomas). The differential diagnosis between lipomas and liposarcomas is broad and includes such indicators as epidermal cysts, subcutaneous tumours, nodular fasciitis, liposarcomas, metastatic disease, erythema nodosum, nodular subcutaneous fat necrosis, vasculitic nodules, rheumatic nodules, sarcoidosis, infections and hematomas.

Treatment modalities for lipomas can be divided into nonexcisional and excisional techniques. Nonexcisional techniques involve steroid injections, which results in fat atrophy, and liposuction, which destroys the adipose tissue but not the fibrous capsule. Steroid injections are used for patients who have small lipomas or do not wish excision. The volume of steroid injected depends upon the size of the lipoma. Regardless, steroid injections will not eliminate the lipoma. Disadvantages include the need for multiple injections and possible depigmentation of the overlying skin. Liposuction may be used for small or large lipomas; however, removal of the entire tumour is difficult.^[12,13] This may be done in the office setting depending on the location and size of the tumour and the experience of the surgeon.^[10] Simple excision is the most common modality of treatment for lipomas. CT or MRI before excision provide important information in distinguishing a fatty benign lesion from a liposarcoma before a surgical approach is made. Many techniques have been described ranging from simple excision to squeeze delivery of subcutaneous lipomas. The surgical excision was chosen because the clinical features of the mass placed the patient at a higher risk of having a tumour with a malignant etiology. Complications after excision of a lipoma most commonly include hematoma, followed by seroma, ecchymosis, infection, deformity, injury to adjacent structures, excessive scarring and fat embolus. Ordinary lipomas recur locally in less than 5% of cases. Those that do recur are usually located in difficult anatomical locations or have microscopically infiltrated into adjacent muscle and were not resected completely during the initial operation.^[1]

In this present study, a case of a patient with a rapid enlargement of a submental lipoma treated successfully with surgical excision under Bilateral Cervical Plexuses Block Anesthesia. A High Resolution CT of the soft tissues of the neck was recommended because of the clinical features of the mass. The surgery produced no functional impairment and good cosmetic results.

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REFERENCES

1. Carlos R Medina, S Schneider, A Mitra BS, J Spears. Giant Submental Lipoma : Case report and review of literature.
2. Barnes L, Ferlito A. Soft tissue neoplasms. In: Ferlito A, editor. *Neoplasms of the Larynx*. 1st edn. London: Churchill-Livingstone; 1993. pp. 265–304.
3. Truhan AP, Garden JM, Caro WA, Roenigk HH., Jr Facial and scalp lipomas: Case reports and study of prevalence. *J Dermatol Surg Oncol.* 1985;11:981–4.
4. Weiss SW. Lipomatous tumors. *Monogr Pathol.* 1996;38:207–39.
5. Tateishi U, Gladish GW, Kusumoto M, et al. Chest wall tumors: Radiologic findings and pathologic correlation: Part 2. Malignant tumors. *Radiographics.* 2003;23:1491–508.
6. Gaskin CM, Helms CA. Lipomas, lipoma variants, and well-differentiated liposarcomas (atypical lipomas): Results of MRI evaluations of 126 consecutive fatty masses. *AJR Am J Roentgenol.* 2004;182:733–9.
7. Ramakantan R, Shah P. Anterior neck lipoma masquerading as an external laryngocoele. *J Laryngol Otol.* 1989;103:1087–8.
8. Rydholm A, Berg NO. Size, site and clinical incidence of lipoma. Factors in the differential diagnosis of lipoma and sarcoma. *Acta Orthop Scand.* 1983;54:929–34.
9. Cotran RS, Kumar V, Collins T. *Robbins Pathologic Basis of Disease*. 6th edn. Philadelphia: WB Saunders Co; 1999. pp. 1260–1.
10. Wilhelmi BJ, Blackwell SJ, Mancoll JS, Phillips LG. Another indication for liposuction: Small facial lipomas. *Plast Reconstr Surg.* 1999;103:1864–7.
11. Field LM. Lipo-suction surgery: A review. *J Dermatol Surg Oncol.* 1984;10:530–8.
12. Rubenstein R, Roenigk HH, Garden JM, Goldberg NS, Pinski JB. Liposuction for lipomas. *J Dermatol Surg Oncol.* 1985;11:1070–4.
13. Calhoun KH, Bradfield JJ, Thompson C. Liposuction-assisted excision of cervicofacial lipomas. *Otolaryngol Head Neck Surg.* 1995;113:401–3.
14. Koh HK, Bhawan J. Tumors of the skin. In: Moschella SL, Hurley HJ, editors. *Dermatology*. 3rd edn. Philadelphia: Saunders; 1992. pp. 1721–808.
15. Zuber TJ. *Soft Tissue Surgery for the Family Physician* (illustrated manuals, videotapes, and CD-ROMs of soft tissue surgery techniques) Kansas City: American Academy of Family Physicians; 1998. Skin biopsy, excision and repair techniques; pp. 100–6.
16. Enzinger FM, Weiss SW. Benign lipomatous tumors. In: Enzinger FM, Weiss SW, editors. *Soft Tissue Tumors*. 2nd edn. St Louis: Mosby; 1988. pp. 301–45.
17. Rapidis AD. Lipoma of the oral cavity. *Int J Oral Surg.* 1982;11:30–5.
18. Ashley DJB. *Evans' Histological Appearances of Tumours*. 3rd edn. Edinburgh: Churchill Livingstone; 1978. p. 54.
19. Del Agua C, Felipe F. Adenolipoma of the skin. *Dermatol Online J.* 2004;10:9.