ejpmr, 2018,5(3), 314-317

SJIF Impact Factor 4.897

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Case Report

ISSN 2394-3211

EJPMR

A RARE CASE OF SUBLINGUAL LIPOMA

[1]Pranav Pandoh, [2]Satyajit Mahanti, [1]*Nitin Yadav, [3]Roomi Yadav, [1]Abhijit Vipul and [4]Rohtas K. Yadav

[1]Senior Resident, Department of Radiodiagnosis, Pt. B D Sharma PGIMS, Rohtak.
[2]Junior Resident, Department of Radiodiagnosis, Pt. B D Sharma PGIMS, Rohtak.
[3]Junior Resident, Department of Pathology, Pt. B D Sharma PGIMS, Rohtak.
[4]Professor & Head, Department of Radiodiagnosis, Pt. B D Sharma PGIMS, Rohtak.

***Corresponding Author: Nitin Yadav**

Senior Resident, Department of Radiodiagnosis, Pt. B D Sharma PGIMS, Rohtak.

Article Received on 27/12/2017 **Article Revised on 17/01/2018** **Article Accepted on 07/02/2018**

ABSTRACT

Sublingual lipomas are uncommon benign lesions of the oral cavity. It is often difficult to distinguish this condition from other more sinister conditions clinically. Imaging plays an important role in establishing the diagnosis and distinguishing this entity from other conditions. We present a case of sublingual lipoma in a middle aged man with relatively atypical ultrasonographic features. Subsequent cross sectional imaging helped in making a definite diagnosis.

KEYWORDS: Sublingual lipomas are uncommon ultrasonographic definite diagnosis.

INTRODUCTION

Lipomas are the most common benign neoplasms of mesenchymal origin and may arise in any location where fat is normally present.[1] Lipomas are composed of mature fatty cells and occur predominantly on the upper back, shoulder and abdomen.[2,3] In the head and neck region, where only 13% of lipomas are seen, the posterior neck space is the most common site.[4,5] Rarely, they can develop in the anterior neck, infratemporal fossa, in or around the oral cavity, pharynx, larynx and parotid gland. Sublingual lipomas are relatively quite uncommon and they can be easily confused with other common benign lesions clinically. Imaging is useful not only to diagnose them with certainty but also to differentiate them from malignant lesions like liposarcoma.

CASE DESCRIPTION

A middle aged man presented to the hospital with complaints of a swelling in the floor of mouth since last 1 year. The swelling was initially showing a gradual increase in size but since last 2 months, it was rapidly increasing in size. On examination, the swelling was off midline, soft in consistency and non-tender. The patient was referred to us for ultrasound (USG) of the oral cavity. The lesion was seen transorally as a heterogenous, predominantly hyperechoic, lesion **(Figure 1).** The inner extent of the lesion could not be delineated as it was extending into deeper planes. No definite vascularity was seen on colour Doppler. Based on USG appearance, a provisional diagnosis of oral cavity epidermoid was made.

The patient was advised CT neck for further evaluation. On CT neck, a hypodense lesion with attenuation value of -80 to -120 HU was seen in sublingual space. The lesion was seen extending into left pharyngeal mucosal, submandibular and parapharyngeal spaces. Laterally the lesion was abutting the deep lobe of left parotid gland. No solid component, septations, or, calcification were seen within the lesion. The CT diagnosis was consistent with lipoma **(Figure 2).** A pre-operative MRI neck was done to define the extent of the lesion, look for neurovascular bundle involvement and rule out any possibility of malignancy. On basic MRI sequences, the lesion showed fat signal intensity **(Figures 3,4).** On fat sat sequences, the lesion showed suppression of internal contents **(Figures 5).** On post contrast sequences, no abnormal enhancement was seen within the lesion **(Figure 6)**. Finally, USG guided fine needle aspiration of the lesion was done. It showed mature fibroadipose tissue fragments in a mucinous background consistent with clinical diagnosis of lipoma **(Figure 7).**

DISCUSSION

The floor of the mouth is the part of the oral cavity that is located under the tongue. It may be involved in a wide range of pathologic processes, some of which are unique to the region. The mucosal surface of the floor of mouth is easily examined clinically, as superficial abnormalities can be assessed visually. Imaging plays a crucial role to assess the disease that extends deep into the floor of mouth or spreads beyond its confines.[6] Common pathologies in the floor of mouth include cystic lesions such as ranula, dermoid and epidermoid cysts; inflammatory processes resulting from spread of dental

infection; penetrating trauma; obstructing submandibular duct calculi and intravenous drug abuse. Other common pathologies include neoplastic lesions, vascular malformations (both high and low flow hemangiomas) and pseudotumors. Neoplastic lesions can be benign such as lipomas or malignant such as squamous cell carcinoma and salivary gland tumors.

Few cases of lipomas of oral cavity have been reported. These represent 1% of benign tongue neoplasms. In descending order of frequency, they occur in the cheek, tongue, floor of mouth, buccal sulcus, palate, lip and gingiva. The floor of mouth is the third most common location for lipomas of the oral cavity after cheek and tongue.[7,8]

Ultrasound examination of ranula, which is a common cystic lesion in sublingual space typically reveals a simple anechoic lesion deep to mylohyoid muscle. It may contain fine internal echoes due to debris. Descriptions of the sonographic appearance of lipomas are more variable. While some authors reporte lipomas to be sonolucent with few internal echoes, others describe them to be echogenic with poorly defined contours.[9,10,11] The reason for these conflicting reports may be the fact that most investigators group lipomas located in various parts of the body under one category such as those found in the extremities, thorax, and abdominal walls, renal angiomyolipomas, adrenal myelolipomas, pelvic dermoids, renal sinus lipomatosis and pelvic lipomatosis.[12]

With the availability of high-frequency high-resolution USG transducers, the internal architecture and appearance of lipomas are now better understood. The characteristic sonographic appearance is that of an elliptical or rounded mass parallel to the skin surface that is hyperechoic relative to adjacent muscle with echogenic striations parallel to skin surface.[13] Hemangiomas may have a similar shape and echogenic lines but are hypoechoic with a heterogeneous echo pattern and contain cystic and sinusoidal spaces as well as the occasional phleboliths.[14] Epidermoid cysts are commonly seen in the submental, submandibular area and sternal notch.[15] They are well defined, hyperechoic relative to adjacent muscle with a uniform echogenicity, and may exhibit distal enhancement. The linear echogenic lines so characteristic in a lipoma are not seen. Branchial cysts are typically located in the posterior submandibular space at the angle of the mandible[16] and thyroglossal cysts usually are seen in the midline below the hyoid. The position of these lesions together with their well-defined cystic nature confirms the diagnosis. However, some lesions may contain cellular material and cholesterol crystals, making them uniformly echogenic, resembling a solid mass.[17]

CT provides a definitive diagnosis of lipoma in virtually all cases. The typical CT characteristics are a well circumscribed, encapsulated, homogeneous, low-attenuation mass that usually measures between -65 and -125 HU.[18] In the great majority of these lesions, the clearly defined CT appearance correlates well with a lack of marginal microscopic infiltration, although such extension, when present, is well beyond the resolution capability of CT scanners and most often goes unnoticed by the surgeon. It is this microscopic infiltration that probably accounts for many of the recurrences.[19,20] Deeper lesions may have scattered areas of internal soft-tissue density often more apparent on CT versus MRI. These may represent areas of fat necrosis, fibrous tissue, blood vessels or muscle fibre. These lesions cannot be confidently differentiated from liposarcoma by imaging. Intramuscular lipomas may invade and interdigitate with the associated skeletal muscle, resulting in a characteristic striated appearance which may help distinguish from liposarcoma.[21]

MRI shows fat signal intensity lesion on all sequences with consequent fat suppression on fat suppressed images. It also helps in ruling out atypical features suggesting liposarcoma and assessment of surrounding anatomy. Most lipomas pose no diagnostic dilemmas. However, when presented with large (>10 cm) or rapidly growing masses, especially in the head and neck region, physicians should be concerned about malignancy. A thin capsule, very thin sepations and scattered small areas of soft tissue density are common however avidly enhancing thick nodular septae, large soft tissue component and calcification are more in favour of liposarcoma. Final diagnosis can be confirmed by FNAC showing mature adipocytes with no cellular atypia.

Although most lipomas can be observed without treatment, they need excision if there is diagnostic uncertainty, lack of homogeneity to palpation, large neck mass (>10cm), rapid growth, associated pain, deep-seated locations (intramuscular or intermuscular) or cosmetic concern. Treatment is complete surgical excision, but liposuction can be useful in certain locations such as the face.[22] Liposuction is sometimes preferred as there is less scarring following the procedure but there is higher chance of recurrence, compared with excision.[23,24]

FIGURES

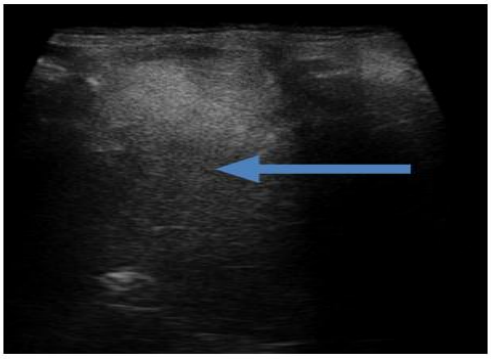

Figure 1: USG image showing heterogeneously hyperechoic lesion (arrow) in the floor of mouth in sublingual area.

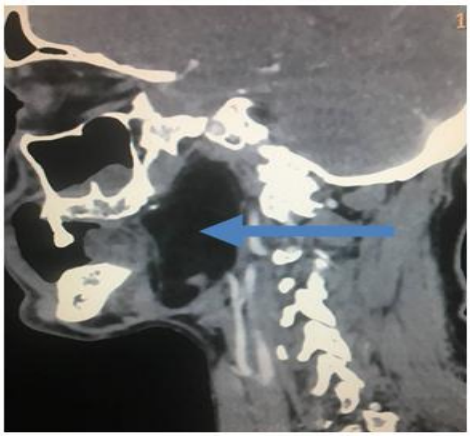

Figure 2: Saggital post contrast CT image of the patient reveals fat density lesion (arrow) in sublingual area extending into submandibular and parapharygeal space.

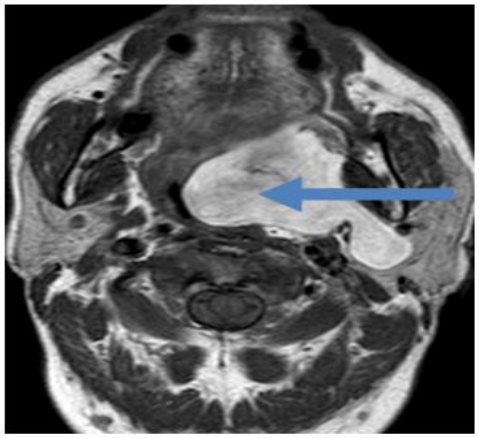

Figure 3: Axial T1 weighted image reveals fat signal intensity lesion (arrow) in sublingual region with extension into adjacent neck spaces.

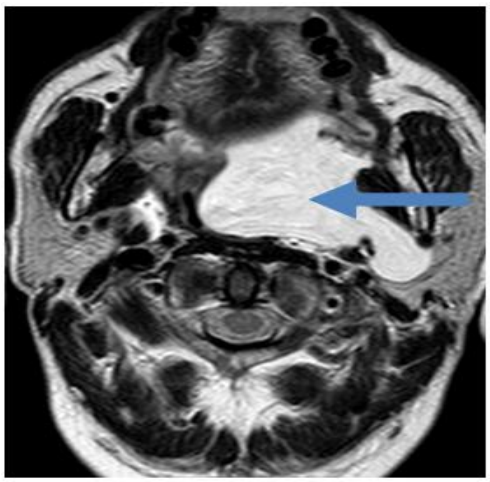

Figure 4: Axial T2 weighted image reveals hperintense lesion (arrow) in sublingual region with extension into adjacent neck spaces.

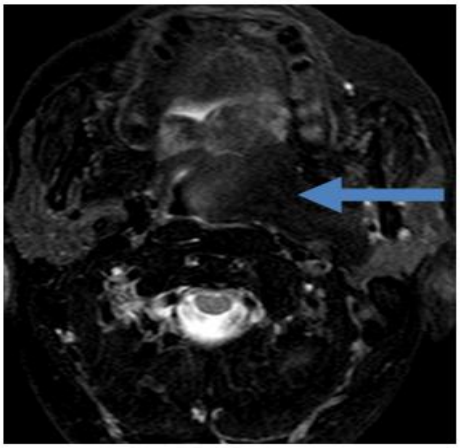

Figure 5: Fat saturated sequence reveals dropout of bright signal of the lesion (arrow) consistent with lipoma.

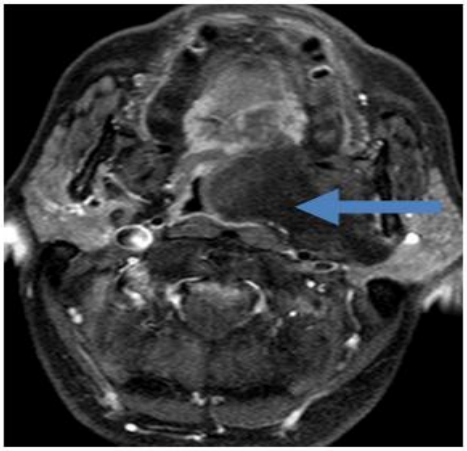

Figure 6: T1 post contrast fat sat image reveals no appreciable enhancement of lesion (arrow).

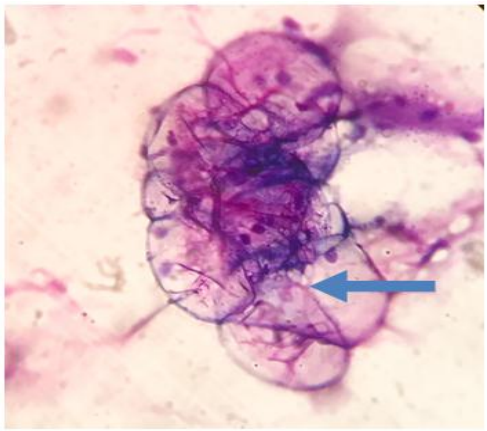

Figure 7: Leishman stained section showing mature fibroadipose tissue fragments in a mucinous background (arrow).

CONCLUSION

Multi-modality imaging is a useful approach in distinguishing lipomas from other benign and malignant lesions in deep spaces of neck. Ultrasound may pose a diagnostic dilemma due to variable appearance of lipoma. However CT and MRI help to establish a

confident diagnosis of lipoma and to differentiate it from malignant liposarcoma based on characteristic imaging features.

REFERENCES

1. Moumoulidis I, Durvasula P, Jani P. Well-circumscribed intramuscular lipoma of the sternocleidomastoid muscle. Auris Nasus Larynx, 2004; 31(3): 283-5.
2. Özcan C, Görür K, Talas D, Aydın Ö. Intramuscular benign lipoma of the sternocleidomastoid muscle: a rare cause of neck mass. European Archives of Oto-Rhino-Laryngology and Head & Neck., 2005; 262(2): 148-50.
3. Enzinger FM, Weiss SW. Benign lipomatous tumors. In: Enzinger FM, Weiss SW, editors. Soft tissue tumors. 3rd edn. St Louis: Mosby, 1995; 381-430.
4. Barnes L, Verbin R, Appel B, Peel R. Tumors and tumorlike lesions of the soft tissues. Surgical Pathology of the Head and Neck., 1985; 2: 1091-5.
5. Medina CR, Schneider S, Mitra A, Spears J, Mitra A. Giant submental lipoma: Case report and review of the literature. Can J Plast Surg., 2007; 15: 219-22.
6. La'Porte SJ, Juttla JK, Lingam RK. Imaging the floor of the mouth and the sublingual space. Radiographics, 2011; 31(5): 1215-30.
7. Hatziotis JC. Lipoma of the oral cavity. Oral Surg., 1971; 31: 511-24.
8. Tan MS, Singh B. Difficulties in diagnosing lesions in the floor of mouth report of two rare cases. Ann Acad Med Singapore, 2004; 33(4 suppl): 72-76.
9. Wild JJ, Reid JM. Further pilot echographic studies on the histologic structure of tumors of the living intact human breast. Am J Pathol, 1952; 28: 839-61.
10. Howry DH. A brief atlas of diagnostic ultrasonic radiologic results. Radiol Clin North Am., 1965; 3(3): 433-52.
11. Goldberg BB. Ultrasonic evaluation of superficial masses. J Clin Ultrasound., 1975; 3: 91-4.
12. Behan M, Kazam E. The echographic characteristics of fatty tissues and tumors. Radiology, 1978; 129: 143-51.
13. Ahuja AT, King AD, Kew J, King W, Metreweli C. Head and neck lipomas: sonographic appearance. American Journal of Neuroradiology, 1998; 19(3): 505-8.
14. Yang WT, Ahuja A, Metreweli C. Sonographic features of head and neck hemangiomas and vascular malformations: review of 23 patients. J Ultrasound Med., 1996; 16: 39-44.
15. Harnsberger HR. The oral cavity: emphasizing the sublingual and submandibular spaces. In: Handbook of Head and Neck Imaging. 2nd ed. St Louis, MO: Mosby-Year Book, 1995; 120-49.
16. Harnsberger HR. Cystic masses of the head and neck: rare lesions with characteristic radiologic features. In: Handbook of Head and Neck Imaging. 2nd ed. St Louis, MO: Mosby-Year Book, 1995; 199–223.
17. Reynolds JH, Wolinski AP. Sonographic appearance of branchial cysts. Clin Radiol., 1993; 48: 109-10.
18. Pisanty S: Bilateral lipomas of the tongue. Oral Surg Oral Med Oral Patho., 1976; 42: 451-53.
19. Kindblom LG, Angervall L, Stener B, Wickbom I. Intermuscular and intramuscular lipomas and hibernomas: a clinical, roentgenologic, histologic and prognostic study of 46 cases. Cancer, 1974; 33: 754-62.
20. Bennhoff OF, Wood JW. Infiltrating lipomata of the head and neck. Laryngoscope, 1978; 88: 839-48.
21. Murphey MD, Carroll JF, Flemming DJ, Pope TL, Gannon FH, Kransdorf MJ. From the archives of the AFIP: benign musculoskeletal lipomatous lesions. Radiographics, 2004; 24(5): 1433-66.
22. Bancroft LW, Kransdorf MJ, Peterson JJ, O'Connor MI. Benign fatty tumors: classification, clinical course, imaging appearance, and treatment. Skeletal Radiology, 2006; 35(10): 719-33.
23. Rubenstein R, Roenigk HH, Garden JM, Goldberg NS, Pinski JB. Liposuction for lipomas. J Dermatol Surg Oncol., 1985; 11: 1070–74.
24. Calhoun KH, Bradfield JJ, Thompson C. Liposuction assisted excision of cervicofacial lipomas. Otolaryngol Head Neck Surg., 1995; 113: 401–03.