International Journal of Otorhinolaryngology and Head and Neck Surgery
Shivpuri A et al. Int J Otorhinolaryngol Head Neck Surg. 2021 Aug;7(8):1388-1390
http://www.ijorl.com
pISSN 2454-5929 | eISSN 2454-5937

DOI: https://dx.doi.org/10.18203/issn.2454-5929.ijohns20212913

Case Report

Frontalis associated intramuscular lipoma: a case report

Anubhav Shivpuri*, Neeru Sharma

Military Dental Centre Kirkee East, Pune, Maharashtra, India

Received: 19 May 2021
Revised: 07 July 2021
Accepted: 08 July 2021

***Correspondence:**
Dr. Anubhav Shivpuri,
E-mail: dranubhavshivpuriomfs@gmail.com

ABSTRACT

Lipomas are the most common benign mesenchymal tumours that are composed of adipose tissue. They can occur at any age and can arise in any location, but are more frequently found on the chest, arm, shoulder and thigh. We report a rare case of lipoma attached to the frontalis muscle in a 65 year old male patient. Clinical examination had revealed a 1.5×1.5 cm in size, firm, non-tender, mobile subcutaneous nodule on the right side of the forehead that gradually increased in size over 8 years. Differential diagnosis of lipoma, liposarcoma, epidermal cyst and sebaceous cyst of the forehead were considered. Non-Contrast computed tomography revealed it to be a solitary, localized, circumscribed nodule within the frontalis without any bony involvement. The nodule was surgically removed and the diagnosis of intramuscular lipoma was confirmed on histopathological examination. The postoperative healing was uneventful and one year follow-up did not show recurrence. The prognosis of the rare frontalis associated intramuscular lipoma is good and risk of recurrence is low provided there is complete removal.

Keywords: Lipoma, Frontalis, Benign mesenchymal tumours, intramuscular

INTRODUCTION

Lipomas are the most common benign mesenchymal tumours that are composed of adipose tissue with an incidence of 1 in 1000. They can occur at any age and can arise in any location, but are more frequently found on the chest, arm, shoulder and thigh.[1,2] Among intramuscular lipomas, frontalis associated lipoma is very rare and very few cases have been reported in literature till date. We report a rare case of lipoma attached to the frontalis muscle in a 65 year old male patient.

CASE REPORT

A 65 years male patient reported with a solitary asymptomatic swelling on the right side of the forehead since 8 years. The swelling was painless thus preventing him from seeking treatment earlier as he feared surgery. The patient had now reported for opinion as he was told that it may be some form of malignancy. There was no history of trauma or infection in the region. Clinical examination showed a 1.5×1.5 cm in size, firm, non-tender, slightly mobile subcutaneous nodule on the right side of the forehead that gradually increased in size over 8 years (Figure 1).

Differential diagnosis of lipoma, liposarcoma, epidermal cystand sebaceous cyst of the forehead was considered. All the routine blood investigations were within normal limits. Non-contrast computed tomography (NCCT) revealed it to be a solitary, localized, circumscribed nodule within the frontalis without any bony involvement.

The pathology was managed by surgical removal in which exposure was done through a transverse incision camouflaged within the forehead skin crease. The incision was extended through the skin and subcutaneous fat and blunt dissection was done to expose the nodule that was dissected through the frontalis muscle.

Haemostasis was achieved by local pressure application as well as by electrocautery. A well-circumscribed mass was excised and sent for histopathological examination (Figure 2). Closure was done in layers in which the frontalis muscle was approximated and sutured using 30 Vicryl resorbable suture and the skin was sutured using a non-resorbable 30 proline suture. Postoperative antibiotic injection Augmentin 1.2 gm was administered twice a day along with analgesic injection Voveran 75 mg twice a day for three days. Suture removal was done after 7 days.

Postoperative healing was uneventful and there were no complications. Histopathology revealed it to be a circumscribed lesion covered by a thin fibrous capsule, composed of mature adipocytes in lobules which confirmed it to be a intramuscular lipoma. The follow up of one year showed no recurrence or any associated complications.

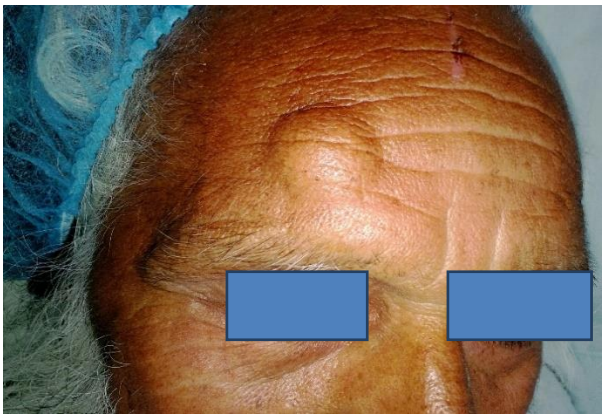

Figure 1: Clinical examination: A 1.5×1.5 cm in size, firm, non-tender, slightly mobile subcutaneous nodule on the right side of the forehead.

Figure 2: Excised lipoma.

DISCUSSION

Lipomas are common benign soft-tissue neoplasms comprising of fat cells. These tumours are frequently found where adipose tissue is present, often resulting in a poor cosmetic appearance causing psychosocial stress. Forehead lipomas are slow growing lesions, usually presenting as a solitary swelling. They are more prevalent in males. Aetiology is unknown; however, trauma has been suspected to contribute to their development.[3,4] The first description of lipoma arising in areas other than subcutis was reported by Uriburu in 1943 while intramuscular lipomas were first described in 1946. The term "frontalis-associated lipoma" was coined by Zitelley and Salasche et al in the year 1989.[5]

They typically present as a smooth asymptomatic dome shaped nodule arising on the forehead with normal overlying skin. Due to their location these lipomas are less mobile and firmer than lipomas at other sites. Frontalis associated lipomas grow slowly and are usually 1-2 cm in diameter, however they can grow up to 4 cm. In our case the size was 1.5×1.5 cm that gradually increased in size. Solitary lipomas are basically classified into two types i.e., superficial and deep. Lipomas associated with muscles are rare and are either located within the muscles i.e., intramuscular lipoma or between the muscles i.e., intermuscular lipoma. Such lipomas are usually seen in patients aged between 40 to 70 years. Among intra-muscular lipomas, frontalis associated lipoma is very rare and very few cases have been reported in literature till date. Frontalis associated lipoma arises in deeper tissue, as compared to traditional lipoma. They may arise in one of four locations: within the frontalis muscle, between the frontalis muscle and the deep investing fascia, in loose areolar tissue between the deep investing fascia of the frontalis muscle and the periosteum also called as "subgaleal lipomas," and/or beneath the periosteum.[5,6]

A clinical examination is usually sufficient to diagnose a frontalis associated lipoma however ultrasonography, computed tomography and magnetic resonance imaging have a role in diagnosis.[4] Histopathologically, intramuscular lipoma can be of two types, well-circumscribed and infiltrative types. Circumscribed type shows presence of fibrous capsule and composed of mature adipocytes similar to superficial lipoma as in our case, whereas infiltrative lipoma is associated with muscle atrophy and degenerative changes.[4,5]

Surgical removal is considered to be the tried and tested method of treatment with a transverse, forehead crease incision most commonly being done under local anaesthesia. Alternative techniques for removal of frontalis associated lipomas include liposuction, removal using distant forehead incisions using endoscope or blind removal using a surgical raspatory.[7] The prognosis of frontalis associated intramuscular lipoma is good, being a benign lesion. None of the treated cases of frontalis associated intramuscular lipomas in literature reported recurrence.

CONCLUSION

Frontalis associated lipomas are rare and very few have been reported in literature till date. The diagnosis is usually done clinically that can be confirmed by

investigations like ultrasound, CT scan or MRI. The tried and tested technique of management is surgical excision although other procedures are also successful. The prognosis of frontalis associated intramuscular lipoma is good and risk of recurrence is low provided there is complete removal. Our case has been managed surgically without any complications and no recurrence during one year follow up.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Shivpuri A, Sharma N. Frontalis associated intramuscular lipoma: a case report. Int J Otorhinolaryngol Head Neck Surg 2021;7:1388-90.