

UNUSUALLY LARGE INTRAORAL SUBMUCOSAL LIPOMA

Running Head: Intraoral lipoma
Yavuz DEMİR¹, Fatma AKTEPE²

¹Afyon Kocatepe University, Faculty of Medicine, Department of Plastic and Reconstructive Surgery, AFYON

²Afyon Kocatepe University, Faculty of Medicine, Department of Pathology, AFYON

ABSTRACT:Lipomas are well-circumscribed benign tumors and represent the most common mesenchymal neoplasm. It is very rare in intraoral cavity. A 25-year old male patient with an intraoral submucosal lipoma in the mandibular region is presented. Surgical removal was achieved with an incision along the inferior gingivobuccal sulcus. At early postoperative period no facial nerve deficit was observed. At 6 months follow-up there was no sign of recurrence and excellent facial symmetry was obtained.

[Key words: lipoma, head and neck, intraoral, submucosal, mandibular region]

INTRODUCTION

Lipomas are benign fatty tumors that are composed of mature fat cells and represent by far the most common mesenchymal neoplasm (1,2). It may present as single or multiple and can arise in any location but the majority occurs in trunk and neck (2). They are very rare in maxillofacial region and they are more common in intraoral than extraoral locations (3). They constitute approximately 1% of all benign tumors of oral cavity (4). It was reported that cheek (32%) is the most common site involved followed by tongue (20%), floor of the mouth (15%), buccal sulcus and vestibule (12%), and other locations (%21) (5). Intraosseous lipomas within the mandible and parotid region are also reported in other uncommon sites [6,7]. The exact nature of this tumor is uncertain but it is widely accepted that lipoma represents a true benign tumor. Lipomas may occur sporadically or as one of several inherited disorders including familial multiple lipomatosis and benign symmetric lipomatosis (8). The lipomas are mostly superficial subcutaneous encapsulated masses but when arising in deeper structures they are poorly circumscribed as in intramuscular (infiltrating) lipomas (2).

Intraoral lipomas generally arise submucosally, presenting as soft, well-defined mobile masses

with yellowish appearance (9). They are asymptomatic in majority of cases but may cause discomfort during speech and mastication in larger cases. The size of the lesions vary but most lesions are less than 1 cm in diameter and lesions greater than 5 cm is extremely rare. Lesions greater than 3 cm may cause facial deformity. Regarding aetiology, it was stated that it may be originated from embryonic rests of lipoblasts and proliferating embryonic mesoderm or fatty degeneration of other cells or metaplasia of muscle cells (10).

We present a case of a large lipoma of intraoral region with an unusual location, which we managed by an intraoral approach.

CASE REPORT

A 25-year-old male patient presented with a painless mobile swelling in his right mandibular region (Fig.1-A). The lesion first appeared 10 years ago and had slowly enlarged since then. He had complaints about masticatory problems and prominent facial aesthetic deformity. Physical examination revealed mobile, painless oval mass in his right mandibular region. There was no neurologic deficit. Intraoral examination showed that the mass was in close relation with the lateral aspect of mandible corpus and was filling the right inferior gingivobuccal sulcus (Fig. 1-B).

The mass was visible as a yellowish swelling under covering mucosal, which was normal in colour and texture with no inflammation. Ultrasonographic evaluation revealed a

multilobulated solid mass consistent with lipoma. There was no associated lymphadenopathy.

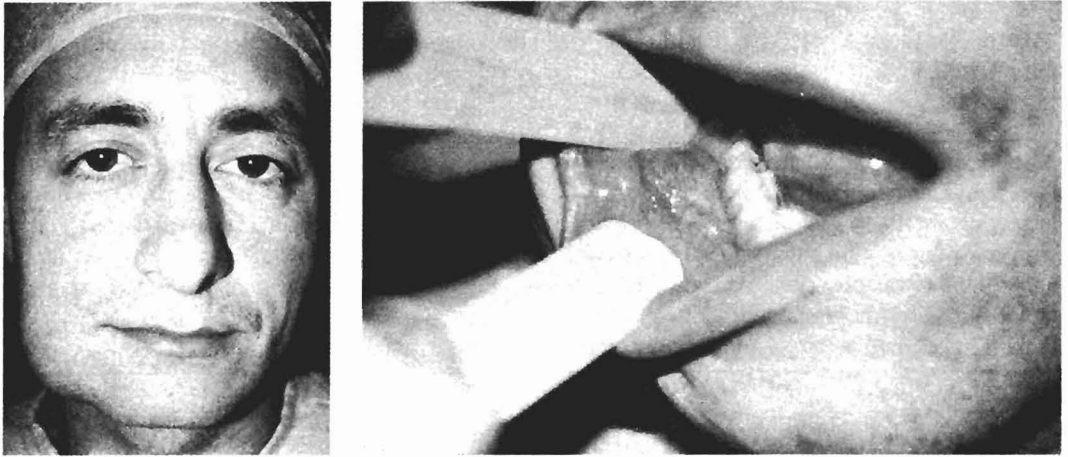


Fig. 1 : Preoperative extraoral (A) and intraoral (B) appearance of the mass in the mandibular region.,

The patient underwent total excision of tumor with an intraoral approach under local anaesthesia. The mass was closely attached to the lateral wall of the corpus mandible. The removal was easy as the mass was well circumscribed and clearly distinguishable from the surrounding muscle and fatty tissue. Any invasion to peripheral muscles or invasion of the tumor by facial nerves was not observed.

Gross specimen was lobulated and encapsulated fatty tumor with 6x4x3 cm dimensions (Fig. 2). Histopathological examination revealed mature fat cells without cellular atypia forming lobules separated by thin fibrous septa (Fig. 3). Lipoma was given as diagnosis.

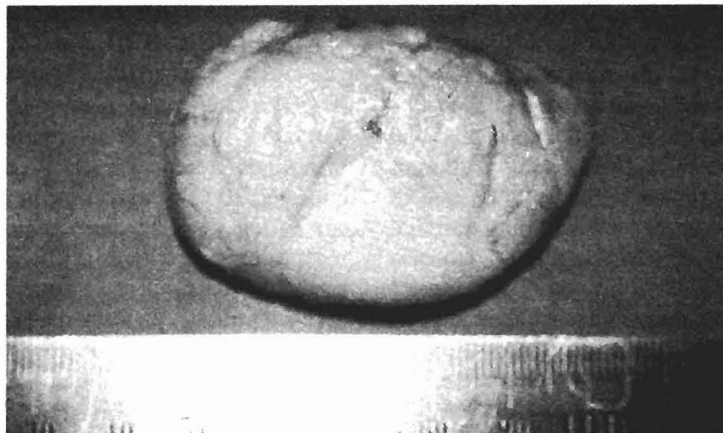


Fig. 2 : The gross appearance of the specimen which was well circumscribed and yellowish.

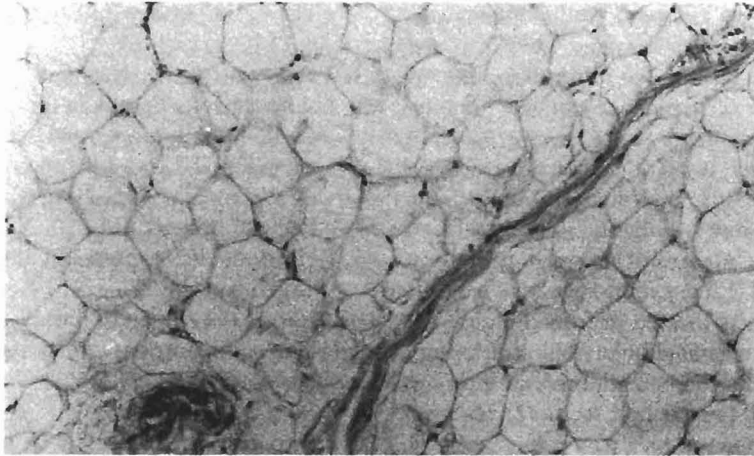


Fig. 3 : Histopathological examination showed mature fat cells without cellular atypia forming lobules separated by thin fibrous septa (H&E, 200X)

Postoperative period was uneventful with no functional deficit of facial nerve. On 6 months follow-up, there was no sign of recurrence. Excellent postoperative facial symmetry could be achieved.

DISCUSSION

Lipoma is well-circumscribed tumor of mature adipocyte tissue and is one of the most common benign neoplasms. Intraoral region is a rare site for its development. Variants of lipoma that are much less common are chiefly represented by angiolipoma, spindle cell lipoma, angiomyolipoma, benign lipoblastoma and pleomorphic lipoma which all have their specific histologic characteristics. The intramuscular (infiltrating) lipomas are considered to be heterotopic lipomas as they arise from other tissues other than adipose tissues. Lipomas do not have diagnostic problems. Clinical presentation in intraoral region is typically as an asymptomatic yellowish submucosal mass with an intact overlying epithelium. Other connective tissue tumors such as granular cell tumor, neurofibroma, traumatic fibroma and salivary gland lesions should be included in differential diagnosis (11).

Malignant change in lipoma is thought to be almost nonexistent though malignant transformation of lipomas in a few cases was reported (12). Malignant transformation in these lipomas are suggested to be a consequence of inadequate examination of excised specimens as malignant characteristics may be missed in some pleomorphic lipomas and well differentiated liposarcomas. Liposarcoma of the facial region is extremely rare encountered (12). Clinically, the differential diagnosis of lipomas with liposarcoma is easy but for the infiltrating (intramuscular) lipomas CT imaging is of value in making this distinction before surgery thus in suspected cases further diagnostic methods should be performed (13).

This case is unusual because of the size and the site of the lipoma. It was adherent to the periosteum of the lateral side of the mandibular body and was extending to inferior mandibular border. Intraoral approach with an incision along the inferior gingivobuccal sulcus was preferred to remove this mass. Extraoral surgical approach and liposuction are other alternatives to deal with these tumors (8,14). It has been stated that intraoral incision has the disadvantage of poor exposure and

complications such as injury to branches of facial nerve hence extended parotidomasseteric or direct incisions over the mass were proposed (14). This may be true for infiltrating lipomas or in suspicion of malignancy but for mobile, well capsulated large lipomas we do not recommend this type of approach, as these tumors may easily be removed due to the mucosal thinning without injuring facial branches. This approach also results in best cosmetic result. Liposuction may have benefits for facial lipomas located in frontal region but in the cheek and mandibular region it is very dangerous due to the potential risk of injury to facial nerves so this method should be reserved only for frontal masses.

There is lack of consensus regarding the pathogenesis of the lipoma. It has been stated that obesity and local growth of adipose tissue may be both responsible for the formation of lipoma (3). Hormonal influences during adolescence on embryonic multipotential cells that remain subclinic were also considered in the differentiation of normal fat cells in lipoma formation suggesting that lipoma is congenital (15). Trauma and chronic irritation was also thought to play a role in the development of lipoma however, trauma is widely accepted as a causative factor in discovery of the lesion rather than the aetiology (5,15). In some areas devoid of fatty tissues, metaplastic transformation of connective tissue is suggested to be the origin in development of lipomas. Furthermore, fibroblasts and muscle cells were also suggested to be the possible precursor cells in these areas (3,10).

Surgical excision of lipomas is the suggested treatment modality and if adequately resected recurrence is rare. Recurrence is more likely in deep lipomas, probably due to the difficulty of complete surgical removal.

REFERENCES

1. Enzinger FM, Weiss SW.: Soft Tissue tumors. The C.V. Mosby Company, St Louis, 2nd edition, p: 301-309, 1988
2. Rosai J.: Ackerman's Surgical Pathology. The C.V. Mosby Co. St Louis, 7th edition p: 1573-1579, 1989
3. Nanavati SD, Nanavati PS: Solitary subcutaneous lipoma in the parotid region. *J Oral Maxillofac Surg* 41:51-53, 1983
4. Ghandour K, Issa M: Lipoma of the floor of the mouth. *Oral Surg Oral Med Oral Pathol* 73:59-60, 1992
5. Hatziotis JC: Lipoma of the oral cavity. *Oral Surg* 31:511-524, 1971
6. Barker GR, Sloan P: Intraosseous lipomas: Clinical features of a mandibular case with possible aetiology. *Br J Oral Maxillofac Surg* 24: 459-63, 1986
7. Dereköy S, Önder T, Ilgiz F, et al.: Solitary subcutaneous fibrolipoma in the parotid region. *Pakistan J Otolaryngol* 10:237-40, 1994
8. Bradon JH, Blackwell SJ, Mancoll JS0, et al.: Another indication for liposuction: Small facial lipomas. *Plast Reconstr Surg* 103: 1864-67, 1999
9. Gray AR, Barker GR: Sublingual lipoma: Report of an unusually large lesion. *J Oral Maxillofac Surg* 49:747-50, 1991
10. Greer RO, Richardson JF: The nature of lipomas and their significance in the oral cavity: A review and report of cases. *Oral Surg* 36:551-57, 1973
11. Joseph Regezei AJ, Sciubba J: Oral Pathology. W.B.Saunders Company, Philadelphia, Pennsylvania, 2nd Edition, p:235-236, 1993
12. Hideharu S, Nagayama M, Kaneda T, Oka T: Liposarcoma of the cheek in an infant. *J Oral Maxillofac Surg* 42:180-84, 1984
13. Pelissier A, Sawaf MH, Shabana AM: Infiltrating (Intramuscular) benign lipoma of the head and neck. *J Oral Maxillofac Surg* 49:1231-36, 1991
14. Ahmmed AU: Surgical approach to lipoma in the cheek, *Ear Nose and Throat J*, (Letter) 70:323-24, 1991
15. Lin JJ, Lin F: Two entities in angiolipoma. A study of 459 cases of lipoma with review of literature on infiltrating angiolipoma. *Cancer* 34:720-27, 1974

AUTHORS:

Y. DEMİR: (MD), Assistant Professor, Afyon Kocatepe University, Faculty of Medicine, Department of Plastic and Reconstructive Surgery

F. AKTEPE: (MD), Assistant Professor, Afyon Kocatepe University, Faculty of Medicine, Department of Pathology

ADDRESS FOR CORRESPONDENCE:

Yavuz Demir, MD, Cumhuriyet mah. Musamci Ali cad. Pembe Kosk apt. B Blok 40/3, Afyon, TURKEY

Ph: (90) 272 213 7858

Fax: 90 272 2172029

E-mail: yavuzdem@yahoo.com.