Fibrolipoma as a Rare Lesion of Oral Cavity: Magnetic Resonance Imaging Findings: Original Image

Oral Kavitenin Nadir Bir Lezyonu Olarak Fibrolipom: Manyetik Rezonans Görüntüleme Bulguları

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ABSTRACT Fibrolipoma is a benign tumor variant of lipoma. Fibrolipomas of the oral cavity are rare. They are more frequent in males than in females, built mostly of fibrous connective tissue. Magnetic resonance imaging (MRI) findings of oral lipomas have previously been described; however, no report on MRI of oral fibrolipomas is available in the literature. This paper reports the MRI features of a large, pedunculated oral fibrolipoma in an adult patient. Unlike oral lipomas, the fibrolipoma was inhomogeneously hyperintense on both T1 and T2-weighted sequences, and revealed a moderate, inhomogeneous contrast enhancement. MRI was also useful to evaluate the region of attachment of the peduncle excluding an infiltrative component.

Key Words: Mouth; lipoma; magnetic resonance imaging

ÖZET Fibrolipom, lipomun benign bir varyantıdır. Oral kavitenin fibrolipomları nadirdir. Erkeklerde, kadınlardan daha sık görülür. Çoğunlukla fibrokonnektif doku tarafından oluşur. Oral lipomların manyetik rezonans görüntüleme (MRG) bulguları daha önce tanımlanmıştır. Bununla birlikte oral fibrolipomların MRG bulguları literatürde tanımlanmamıştır. Bu çalışmada yetişkin bir hastada saptanan geniş ve pedinküllü bir oral fibrolipomda MRG bulguları sunulmaktadır. Oral lipomlardan farklı olarak fibrolipom, T1 ve T2-ağırlıklı sekanslarda heterojen hiperintens olarak izlenmektedir ve orta derecede heterojen kontrastlanma göstermektedir. Ayrıca infiltratif bir komponenti dışlamak için pedinkülün köken aldığı bölgeyi göstermek için de MRG'den yararlanılmıştır.

Anahtar Kelimeler: Ağız; lipom; manyetik rezonans görüntüleme

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Fibrolipoma is an infrequent benign tumor variant of lipoma, characterized by the presence of adipose and fibrous tissues. They are more frequent in males than in females.[1] Although MRI of oral lipomas has previously been described, to date no MRI report on oral fibrolipomas is available in the literature.[1-3] This is likely due to the rarity of oral location of fibrolipomas.[1,4-14] Herein, we report the MRI findings in a patient with a pedunculated tumor in the oral cavity, originating from the superior alveolar gingiva as a slowly growing mass. A brief review of the relevant literature is included.

CASE REPORT

A 54-year-old female patient was referred to the ENT specialist due to the presence of a large tumor of the oral cavity causing mechanical and swal-

lowing problems. The patient had noticed the tumor as a small nodule at the buccal side of the left superior alveolar gingiva more than 20 years ago. She has been neglecting it since the tumor reached significant size in the last few years, becoming a major obstacle for eating, chewing and swallowing. Inspection revealed a mobile tumor with a smooth surface filling half the oral cavity. MRI of the oral cavity was performed to exclude infiltrative component of the tumor and to evaluate its posterior aspect. MRI revealed a big pedunculated tumor of 8 x 4 x 4 cm, originating from the buccal side of the alveolar gingiva. The tumor had a dumbbell shape due to extension to the anterior vestible and it descended into the oropharyngeal cavity 2 cm above the apex of the epiglottis with subtotal obliteration of the oropharynx. There was no evidence of infiltration. The tumor appeared inhomogeneously hyperintense on both T1-weighted (TR/TE, 400/15 ms) and T2-weighted (TR/TE, 4000/100 ms) sequences with a moderate, inhomogeneous contrast enhancement (Figure 1 A-D). The complete surgical removal of the mass with resection of implantation pedicle was successful. It was a soft, yellow encapsulated mass, covered by thin epithelium with a vascular pattern. Microscopic evaluation of the lesion revealed a mixture of mature adipose tissue and fibrous connective tissue, consistent with fibrolipoma (Figure 2). The healing process was uncomplicated and there has been no evidence of recurrence.

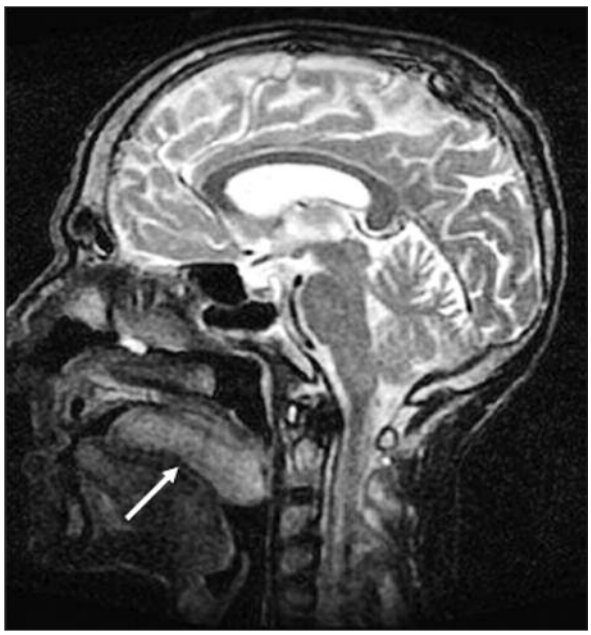

FIGURE 1A: Sagittal, T2-weighted image reveals the mass (white arrow) in the oral cavity.

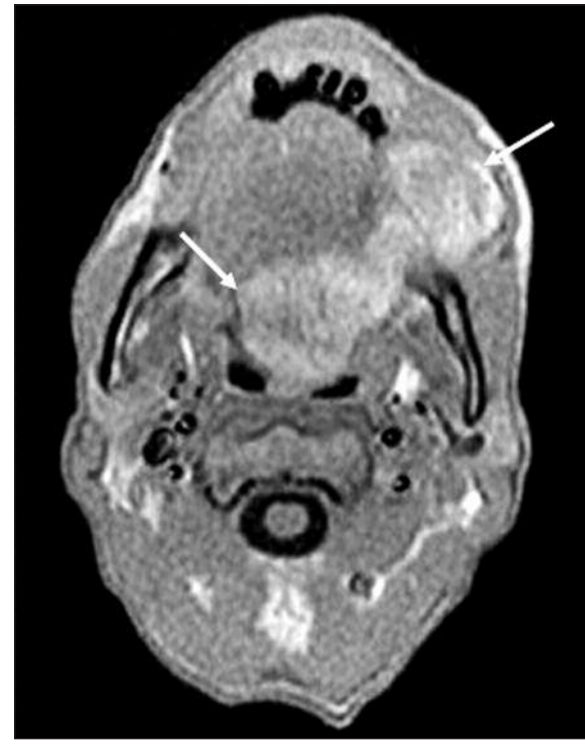

FIGURE 1B: Transverse, T1-weighted image reveals the pedunculated tumor (white arrows) with inhomogeneous appearance. There is no evidence of infiltration to the surroundings at the site of its attachment.

DISCUSSION

Lipomas are occasionally altered by the admixture of other mesenchymal elements that form an intrinsic part of the tumor. The most common elements among these are fibrous connective tissue. Lipomas with these elements are often classified as fibrolipomas and are composed of adipose and fibrous tissues. Fibrolipomas of the oral cavity are uncommon benign mesenchymal neoplasms. They are usually solitary and they predominantly affect the buccal mucosa.[1,3-5]

Clinically, oral fibrolipomas generally present as mobile, painless, submucosal nodules, as in our case.[2]

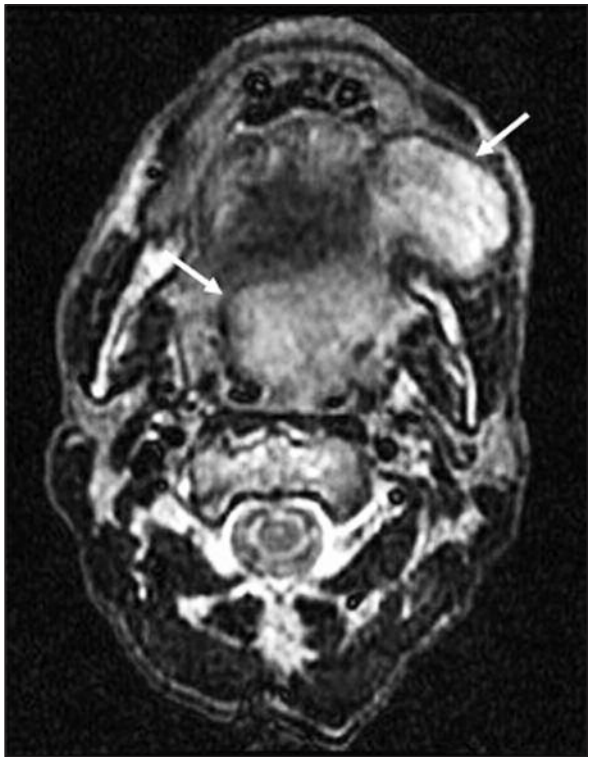

FIGURE 1C: Transverse, T2-weighted image reveals the inhomogeneous mass appearance and no evidence of infiltration (white arrows).

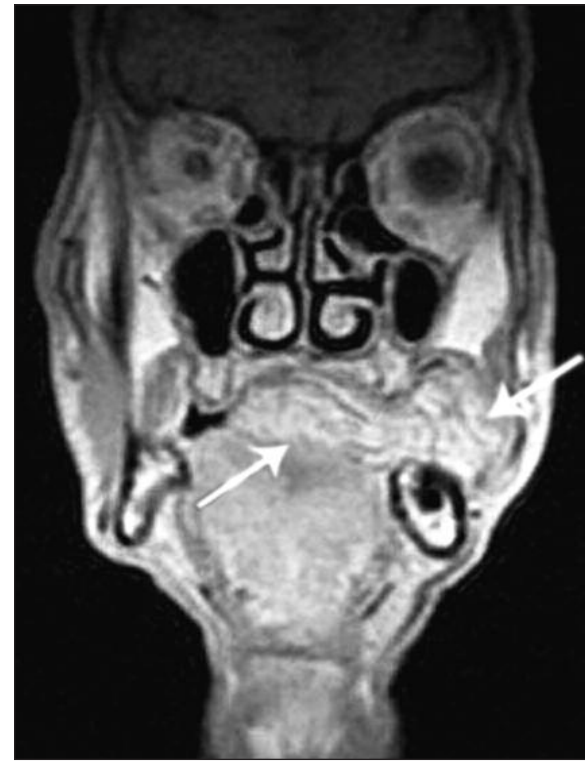

FIGURE 1D: Coronal, contrast-enhanced T1-weighted image reveals the inhomogeneous appearance of the mass (white arrows).

A review of the literature indicates that oral location of fibrolipoma is quite rare. Two major studies covered lipomas and their variants with benign histology including fibrolipomas.1,2 Furlong et al reviewed 125 lipomas in specific oral and maxillofacial locations from the records of the Oral and Maxillofacial Pathology Registry of the Armed Forces Institute of Pathology from 1970 to 2004.[1] Specific anatomic sites within the oral and maxillofacial region included the parotid region (n= 30), submandibular region (n= 17), buccal mucosa (n= 29), lip (n= 21), tongue (n= 15), palate (n= 6), floor of the mouth (n= 5), and vestibule (n= 2). Based on histological evidence, the tumors were subclassified as classic lipomas (n= 62), spindle cell/pleomorphic lipomas (n= 59), chondroid lipomas (n= 2), and fibrolipomas (n= 2).[1] de Visscher JG reported 19 lipomas and fibrolipomas of the oral cavity with a review of 225 cases present in the literature from 1945 to 1981. These studies suggested that most of these tumors occurred in patients in the fifth to the seventh decade with male predominancy, and they were uncommon in children. Histologically, classic lipomas and spindle cell lipomas were common, whereas fibrolipomas, especially oral fibrolipomas were rare.[1] In addition to these two studies,

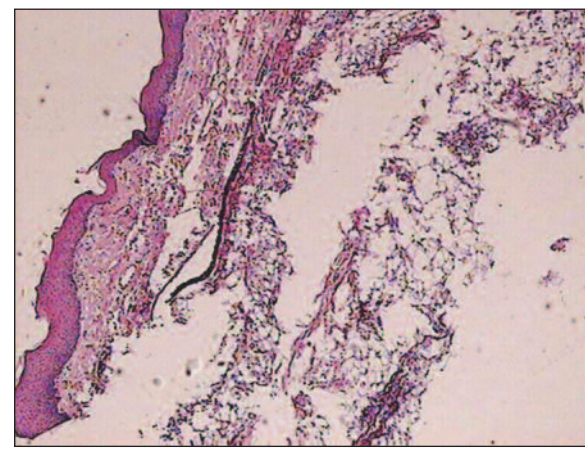

FIGURE 2: Histology reveals a mixture of mature adipose tissue and fibrous connective tissue, consistent with fibrolipoma (HE, x50).

11 case reports are present in the literature on oral fibrolipomas.[4-14]

With respect to the MRI appearance of previously described oral lipomas, they were hyperintense on T1 and T2-weighted sequences.[3-5] On the other hand, absence of a previous MRI report on oral fibrolipoma is likely due to the rarity of the location, as well as to easy access of the tumor by the clinician. In our patient, the fibrolipoma appeared relatively inhomogeneously hyperintense on T1 and T2-weighted sequences, and on contrast-enhanced T1-weighted sequences. This pattern was quite different from that of previously reported oral lipomas.[2-4] Recently, Kim et al reported that a central, ovoid fibrolipoma mass within the subcutaneous fat layer of the left buttock did not show any enhancement. In the present case, however, inhomogeneous moderate enhancement in nonfatty (fibrous) regions in fibrolipoma was observed.[15] The pedicle of the fibrolipoma was clearly visible without evidence of infiltration to the surroundings. It is suggested that, these MRI features may be useful in characterizing oral fibrolipomas for their differentiation from other tumors.

Oral soft tissue lipomas, dermoid and epidermoid cysts and oral lymphoepithelial cysts should be considered in the differential diagnosis of oral fibrolipomas. Particularly, fibrolipomas should be differentiated from spindle cell lipomas. Spindle cell lipomas have been reported in oral cavity.[2,3]

Fibrolipomas are treated by complete surgical excision. Liposarcoma can occur in long standing cases. Recurrence can occur after longer intervals. Recurrence of the tumor is usually due to inadequate surgical excision.[5,7-9]

In conclusion, it should be noted that benign atypical lipomatous tumors have various imaging findings regarding shapes, locations, and signal intensities according to their histological differences. We underline the fundamental role of MRI in studying lipomatous lesion extension and particularly in characterizing atypical lipomatous lesions of the head and neck region.

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