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Case Report
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Buccal Osteochondroid Lipoma: A Case Report

Bukkal Osteokondroid Lipom: Olgu Sunumu

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ABSTRACT

Aim: Lipomas are the most common benign soft tissue neoplasms that rarely contain osseous and chondroid tissues. Lipoma with osteochondral tissue is usually named osteolipoma or chondrolipoma. In this article, we aimed to discuss the differential diagnosis and clinical features of osteochondroid lipomas.

Case: We present a case of osteochondroid lipoma of the buccal region. Radiologic examination revealed a well-defined, lipomatous lesion that contained rough calcified areas. Intraoral excision was applied for the surgical treatment. There was no local recurrence in the follow up.

Conclusions: Lipomas with osteochondroid metaplasia are rare lesions in the head and neck region. Osteochondroid lipomas should be considered in lipomatous lesions containing calcified areas that are well-defined, and they do not show erosion and destruction in the surrounding tissues in radiological imaging.

Keywords: Lipoma; metaplasia; neoplasms.

ÖZ

Amaç: Lipomlar, en sık görülen benign yumuşak doku neoplazmları olup nadiren osseöz ve kondroid doku içerir. Osteokondral doku içeren lipomlar genellikle osteolipoma veya kondrolipom olarak adlandırılır. Bu yazıda osteokondroid lipomların ayırıcı tanısını ve klinik özelliklerini tartışmayı amaçladık.

Olgu: Bu çalışmada, bukkal bölge bir osteokondroid lipom olgusunu sunmaktayız. Radyolojik incelemede kaba kalsifiye alanlar içeren, iyi sınırlı, lipomatöz lezyon görülmüştür. Cerrahi tedavide ağız içi eksizyon uygulanmış, izlemde lokal nüks görülmemiştir.

Sonuç: Osteokondroid metaplazi içeren lipomlar baş boyun bölgesinde nadir görülen lezyonlardır. Radyolojik görüntülemede çevre dokularda erozyon ve destrüksiyon göstermeyen, iyi sınırlı, kalsifiye alanlar içeren lipomatöz lezyonlarda osteokondroid lipomlar düşünülmelidir.

Anahtar Kelimeler: Lipom; metaplazi; neoplazmlar.

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Introduction:

Lipomas are the most common benign mesenchymal soft tissue neoplasms (1-4). They may be located anywhere in the body and are usually slow-growing, solitary, and superficial lesions (2). Histopathologically, lipomas are composed of mature similar adipocytes (1,2). They rarely contain other mesenchymal elements, such as fibrous tissue, blood vessels, bone or cartilage (5,6). The terminologies used for lipoadipocytic tumors with an osseous/cartilaginaous component are confusing. For example, some of these terms include ossifying fibroma, osseous lipoma, and lipoma with osseous metaplasia (7). Benign adipocytic tumors are classified in the World Health Organization list as follows: lipoma, lipomatosis, lipomatosis of nerve, lipoblastoma/lipoblastomatosis, angiolipoma, myolipoma, chondroid lipoma, extrarenal angiomyolipoma, extra-adrenal myelolipoma, spindle cell/pleomorphic lipoma, and hibernoma (8). Chondrolipomas are common in proximal extremities and limb-girdles. They are rare in the head and neck region and trunk (9). In most cases, lipoma with osseous/cartilaginous metaplasia is often referred to as osteolipoma and chondrolipoma in the literature (10). Radiologically, a calcified mass accompanying the lipoma is seen depending on osseous/cartilaginous areas (11,12). It may be difficult to distinguish them from other benign and malignant neoplasms clinically and histopathologically. They do not show local recurrence and do not metastasize after surgical resection (9).

In this study, we present a case of lipoma with osteochondroid metaplasia located on the left buccal region, and discuss differential diagnoses and treatment methods in light of the literature.

Case

A 65-year-old male patient was admitted to our department of otorhinolaryngology with a left cheek mass that had been present for seven years. The patient said that the mass had enlarged within the last two months. In the physical examination, an almost 3 cm in diameter subcutaneous soft tissue mass located on the left buccal region lateral to the corpus of the mandible was palpated. Ultrasonographic examination revealed a 20x11 mm diameter solid hypoechoic mass lesion located in the anterior mandibular region. The mass contained rough calcification areas. Fine needle aspiration biopsy reported an undiagnostic result. In the contrast-enhanced computerized tomography (CT); a 33x22 mm diameter lipomatous mass with rough calcifications was located near the lateral surface of the anterior left ramus mandible in the subcutaneous tissue (Figure 1)

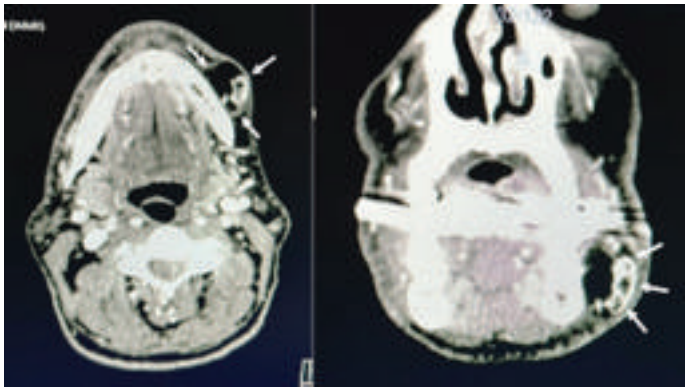

Figure 1: Arrows indicate lipomatous mass that contain rough calcified areas lateral to the left corpus mandible with smooth margins on axial and coronal CT sections

There was no invasion, erosion, or destruction of the mandible. The mass showed smooth contours. Lipoma or differentiated liposarcomas can be considered in the differential diagnosis.

Magnetic resonance imaging (MRI) was planned asfurther radiologic imaging to better evaluate whether this lesion had spread to the surrounding soft tissues. In the fat-suppressed magnetic resonance imaging sections, lipomatous lesions with thin capsules were observed in the left mental region (Figure 2).

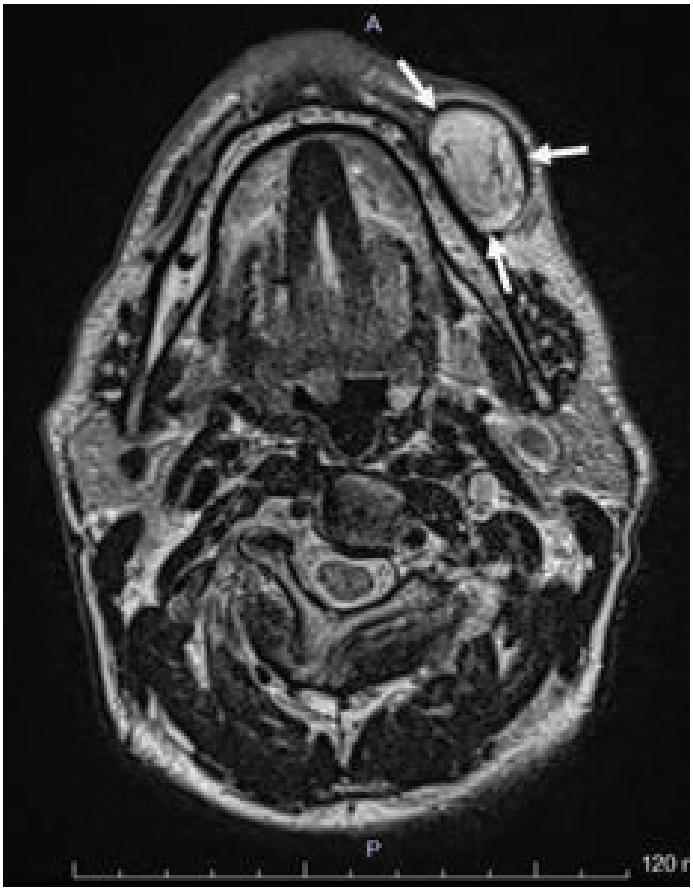

Figure 2: Lipomatous mass (between the arrows) lateral to the left corpus mandible has smooth margins on T2-weighted MRI. The mass contains rough calcified areas.

The mass was excised completely via a transoral approach with a buccal mucosal incision. A 4x2 cm in diameter lipomatous mass that was contained in the solid areas was removed with blunt dissections (Figure 3).

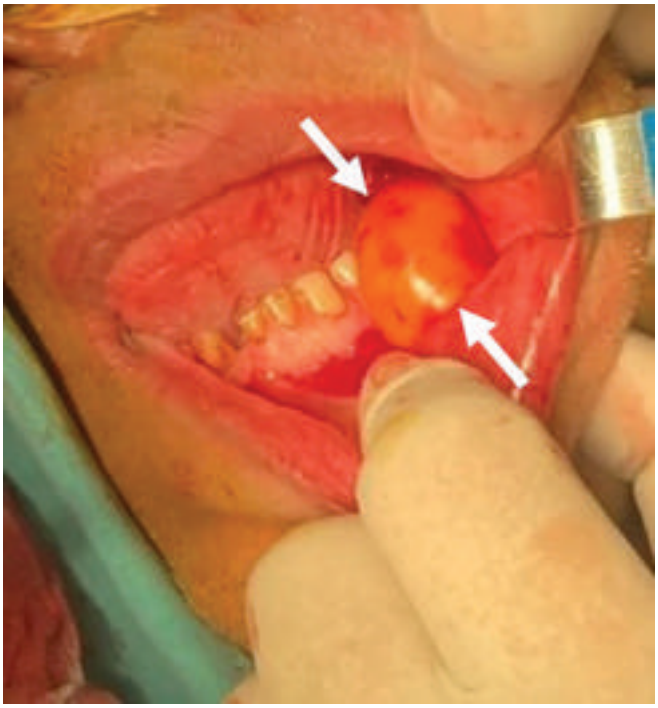

Figure 3: Intraoperative view of the lipomatous mass (between the arrows).

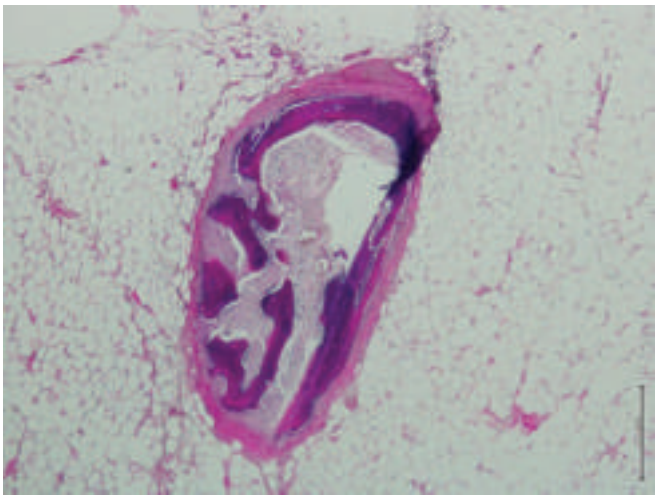

Figure 4: Nodular development of the osteochondroid metaplasia area is observed in adipose tissue. Mature fat cells are similar in shape and size (HEx40).

The incision was closed with primary sutures. The postoperative period was uneventful. In the histopathologic examination, multiple osteochondroid metaplasia areas in the lesion were detected. These areas were composed of mature fat cells with no different size and shape (Figure 4). A written consent form was obtained from the patient.

Discussion

Lipomas are the most common benign neoplasms of adipose tissue; however, their head and neck localization is rare. The study by Furlong et al. examined 125 lipomatous cases located in the oral and maxillofacial regions (3). The localization of the lesions was found in the parotid region, buccal mucosa, lip, submandibular region, tongue, palate, floor of the mouth, and vestibule. Of these, 62 were lipomas, 59 were spindle cell/pleomorphic lipomas, two were fibrolipomas, and two were chondrolipomas. Cartilaginous or osseous metaplasia in lipomas is extremely rare. One of the chondroid lipomas was found on the lip,while the other was found in the submandibular region. Lipomatous lesions are generally observed to be located in the maxillofacial region, often in the parotid and buccal regions (3).

Lipoma variants are characterized by additional components, for example, capillary structures in angiolipoma. In lipomas, cartilaginous and/or osseous metaplasia are very rare. Adipose tissue is more dominant in osteochondroidlipomas (6). Most cases with osseous/cartilaginous metaplasia are often named osteolipoma and chondrolipoma (10). Osteochondrolipomas can manifest in different regions of the head and neck, such as the buccal, submandibular region, tongue, soft and hard palate, mental region, nasopharyngeal region and floor of the mouth (2-5, 13-16). They can be soft, fluctuant, or hard, depending on the component and their location on the examination. Their surface is typically smooth (7,13,14). However, they are usually soft in the physical examination because of the predominance of adipose tissue (6). It is noteworty that other malignancies are usually firm and grow rapidly (17). In our case, the lesion was soft similar to a lipoma, and the case had a mass for seven years.

In the CT scan of the mass, it is possible to observe a well-defined, heterogeneous density and hyperatenuation (due to calcification). Lesions do not erode the underlying tissues (7,13,15). The T1-weighted MRI images have high signal intensity with well-defined borders. They appear as hyperintense or hypointense on T2-weighted sections, depending on the tissues they contain (7). Radiologically, a calcified mass accompanying the lipoma is also seen in chondroma, enchondroma, chondrosarcoma, and liposarcomas (11).

Therefore, the absence of erosion and/or destruction in the surrounding tissues is important in the differential diagnosis. In our case, the lesion was well-defined and contained rough calcified areas, radiologically. There was no erosion or destruction of the mandible.

The histopathological differentiation of lipomas containing osteocartilaginous metaplasia from other benign and malignant lesions is problematic (1). Chondroid lipomas are benign adipose tissue tumors containing lipoblasts,

mature fat, and chondroid matrix (9). Mature adipocytes are similar in shape and size. There are mesenchymal lesions in the differential diagnosis of osteochondrolipomas (17). In these cases, mesenchymal hamartomas are typically observed in neonates and children, and may be quite large and partially cystic. In osteochondrolipomas, fat, cartilage, and bone tissues usually create smooth and well-defined foci, with the main tumoral content being adipose tissue. In the differential diagnosis of teratoma, ossifying fibroma, myositis ossificans and extraskeletal osteochondromas, the main tumoral content is not adipose tissue. A wide excision is always important for the differential diagnosis from low-grade fibromyxoid sarcoma, liposarcoma, and myxofibroma (12, 17). It can be challenging to evaluate true-cut or small biopsies (17).

Surgical excision is curative in the treatment of osteochondrolipomatous lesions (7,9,14,15). They do not show local recurrence and do not metastasize (9). Lipomas located in the oral area may cause nutritional problems especially in geriatric patients, it is recommended that they should be excised without delay (18).Depending on the location, various surgical approaches can be applied including transoral, transpalatal, transnasal endoscopic, and parotidectomy approaches (7,15,16).

In conclusion, lipomas with osteochondroid metaplasia are rare lesions in the head and neck region. While they are usually softly palpable on physical examination, they may sometimes contain hard areas depending on the osteochondral tissue. Osteochondrolipomas should be considered in lipomatous lesions containing well-defined calcified areas that do not show erosion and destruction in the surrounding tissues in radiological imaging. Surgical excision is required for a definitive diagnosis. Moreover, buccal osteochondroidlipomas should be surgically excised as they may cause nutritional and aesthetic problems.

Statements and Declarations

The authors declare no conflict of interest.

The authors disclose that no grants or support resources were used.

All authors declared their contribution to the study at all stages and approved the final version of the manuscript.

All authors declared that this manuscript has not been published before and is not currently being considered for publication elsewhere.

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