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Maxillary Diffuse Large B-cell Lymphoma Mimicking an Odontogenic hyperplastic Reactive Lesion: A Case Report

Odontojen Hiperplastik Reaktif Lezyonu Taklit Eden Maksiller Diffüz Büyük B Hücreli Lenfoma: Olgu Sunumu

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ABSTRACT

INTRODUCTION: Lymphomas are a heterogeneous group of lymphoproliferative neoplasms that are morphologically classified as Hodgkin's lymphoma and non-Hodgkin's lymphoma (NHL). Although these pathological entities are considered to be relatively rare in the head and neck region, they are the most common non-epithelial malignant tumors following squamous cell carcinoma.

METHOD: The lesion was completely excised, wound was primarily approximated, and surgically excised enucleated mass was sent for histopathologic examination. The examination confirmed the diagnosis of DLBCL.

RESULTS: A 68-year-old male was diagnosed in our department with a 1-month history of tooth mobility in the right maxillary posterior region and discomfort while chewing on this side. In his medical history, the patient described a mass presentation in the head and right leg 3 months back; however, no treatment was administered, and the mass disappeared.

DISCUSSION AND CONCLUSION: DLBCL is the most frequent histologic NHL subtype affecting the head and neck region. Detecting DLBCL at an early stage is critical; dentists have a critical role in early diagnosis and avoiding delay in the treatment. AII suspected oral lesions must be examined carefully. Attention must be given to radiographic signs, and all suspicious lesions should be sent for histopathological examination.

Keywords: *Oral lymphoma, diffuse large B-cell lymphoma, malignant tumor*

ÖZ

GİRİŞ ve AMAÇ: Lenfomalar, morfolojik olarak Hodgkin lenfoma ve Hodgkin dışı lenfoma (NHL) olarak sınıflandırılan heterojen bir lenfoproliferatif neoplazmalar grubudur. Bu patolojik antitelerin baş ve boyun bölgesinde nispeten nadir olduğu kabul edilmekle birlikte, skuamöz hücreli karsinomu takiben en yaygın görülen epitelyal olmayan malign tümörlerdir.

YÖNTEM ve GEREÇLER: Lezyon tamamen eksize edildi, yara primer olarak kapatıldı ve cerrahi olarak eksize edilen kitle histopatolojik incelemeye gönderildi. Patoloji sonucunda DLBCL tanısını doğrulandı.

BULGULAR: 68 yaşında erkek hasta 1 aydır sağ maksiller arka bölgede diş hareketliliği ve bu tarafta çiğneme sırasında rahatsızlık şikayeti ile kliniğimize başvurdu. Hasta anamnezinde 3 ay önce baş ve sağ bacakta kitle mevcudiyeti oldıuğunu, tedavi görmeden kendiliğinden kitlenin kaybolduğunu belirtmiştir.

TARTIŞMA ve SONUÇ: DLBCL, baş ve boyun bölgesini etkileyen en sık görülen histolojik NHL alt tipidir. DLBCL'yi erken bir aşamada saptamak önem taşımaktadır; erken teşhis ve tedavide gecikme olmamasında diş hekimlerinin kritik rolü vardır. Tüm şüpheli oral lezyonlar dikkatlice incelenmelidir. Radyografik bulgulara dikkat edilmeli ve tüm şüpheli lezyonlar histopatolojik incelemeye gönderilmelidir.

Anahtar Kelimeler: *Oral lenfoma, diffüz büyük B hücreli lenfoma, malign tümör*

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INTRODUCTION

Lymphomas are a heterogeneous group of lymphoproliferative neoplasms that are morphologically classified as Hodgkin's lymphoma and non-Hodgkin's lymphoma (NHL).[1–3] Although these pathological entities are considered to be relatively rare in the head and neck region, they are the most common non-epithelial malignant tumors following squamous cell carcinoma.[1,2,4]

The most common subtype of NHL diagnosed in the oral and maxillofacial region is diffuse large B-cell lymphoma (DLBCL).[2,5] This NHL subtype is clinically heterogeneous and may arise in the lymph nodes or variable extranodal regions. DLBCL rapidly develops, has aggressive behavior, and most commonly occurs in the buccal mucosa, hard palate, gingiva, and maxillary vestibule.[3] The involvement of DLBCL in the gingival region is rare owing to no existing lymphoid tissues.[6]

Clinical symptoms, such as local edema, ulceration, bone destruction, and tooth mobility may be observed depending on the tumor location.[5] However, this neoplasm can often be misdiagnosed owing to nonspecific clinical characteristics and mimicking odontogenic inflammatory diseases, such as periodontal disease and pyogenic granuloma. Moreover, oral health professionals are not aware of this presentation.[7]

This report describes the diagnosis and treatment of a rare case of DLBCL in a male, mimicking an odontogenic hyperplastic/proliferative reactive lesion in the posterior maxillary region. Attention has been focused on the clinical findings, differential diagnosis, and treatment alternatives for DLBCL.

CASE REPORT

A 68-year-old male was diagnosed in our department with a 1-month history of tooth mobility in the right maxillary posterior region and discomfort while chewing on this side. In his medical history, the patient described a mass presentation in the head and right leg 3 months back; however, no treatment was administered, and the mass disappeared.

Clinical evaluation revealed a dark red-colored lesion located on the buccal gingival of the maxillary right first molar and covering the second molar (Figure 1). Panoramic and periapical radiographs revealed an irregular radiolucent lesion involving the maxillary first and second molars without any root resorption (Figure 2a, Figure 2b). Based on the clinical and radiological findings, it was presumed that the lesion had a non-odontogenic origin and could be a malignant tumor; therefore, excisional biopsy with the extraction of the involved molars was planned under local anesthesia. The lesion was completely excised, wound was primarily approximated, and surgically excised enucleated mass was sent for histopathologic examination (Figure 3).The examination confirmed the diagnosis of DLBCL.

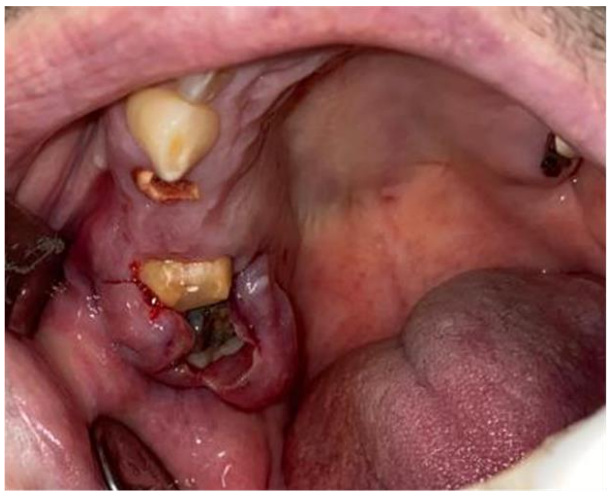
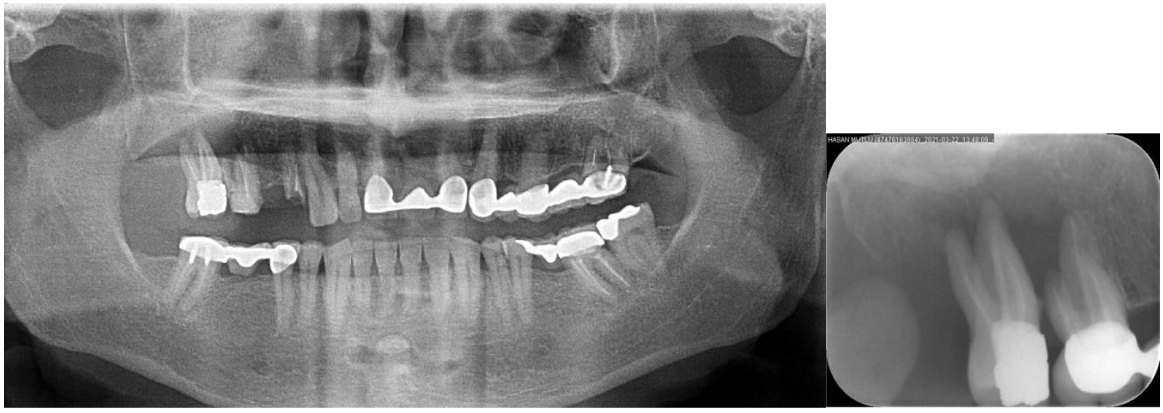


Figure 1: Dark red-colored lesion located on the buccal gingival side of the maxillary right first molar and covering the second molar



a **b**

Figure 2a,2b: Panoramic and periapical radiographs revealed an irregular radiolucent lesion involving the maxillary first and second molars without any root resorption.

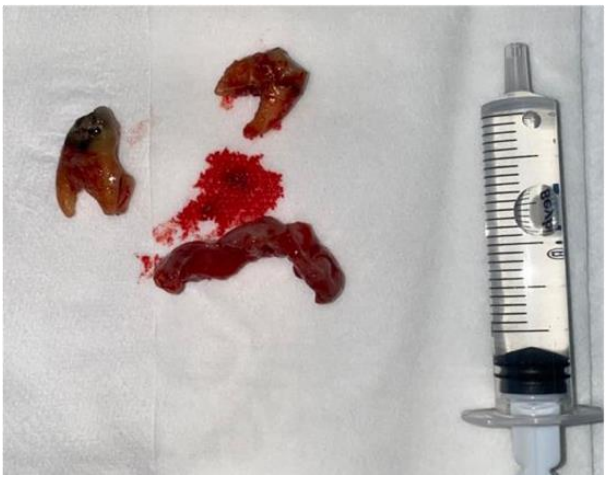
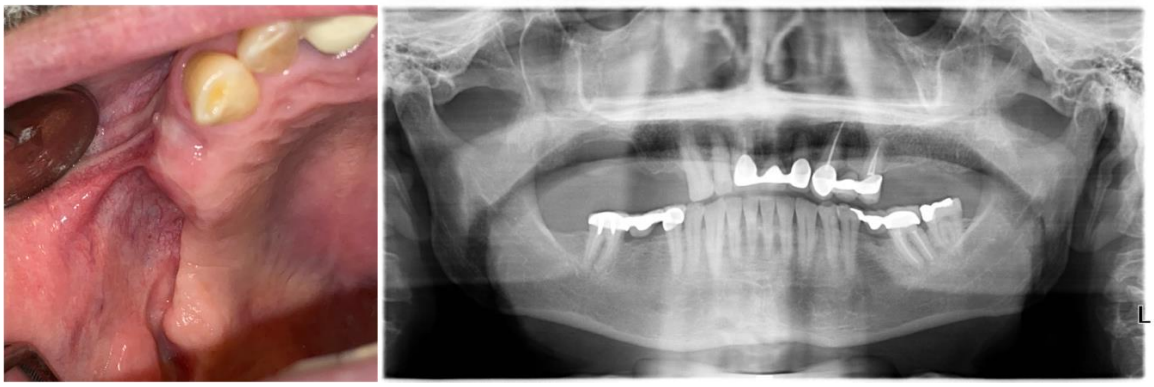


Figure 3: The lesion was completely excised, wound was primarily approximated, and surgically excised enucleated mass was sent for histopathologic examination.

Following the diagnosis, the patient was referred to a hematologist for detailed evaluation. He received six courses of chemotherapy and demonstrated satisfactory recovery after the treatment. The patient was scheduled for frequent routine follow-ups. Six months later, a positron-emission tomography scan of the patient confirmed complete tumor remission. Also clinical and radiological examination performed after 2 years showed no signs of recurrence (Figure 4a,Figure 4b).



a **b**

Figure 4 a,b: Clinical and radiological examination performed after 2 years showed no signs of recurrence

DISCUSSION

DLBCL is the most frequent histologic NHL subtype affecting the head and neck region.[1,4,6] Approximately 38% of malignant lymphomas detected in the para-oral region are diagnosed as DLBCL; intraorally this ratio is 3%–5% among all oral malignancies.[4,8,9] Although this rare pathological entity has been observed in patients of all ages, it is more frequently recognized in the 6th–7th decade and is more dominant in the male sex.[5,6] This report presents a rare case of DLBCL in an elderly man; in differential diagnosis, this patient was also evaluated for pyogenic and peripheral giant cell granulomas owing to the similarity of clinical features.

The etiology of DLBCL consists of autoimmune diseases, infectious agents (particularly Human Immunodeficiency Virus [HIV]), ultraviolet radiation, and chemical agents; however, many patients with DLBCL have no specific etiology.[10,11] The rapid growth of the lesions may be associated with HIV; this infection can be a risk factor for developing NHL. In their study, De Carvalho et al. reported that in HIV-positive patients, the infection induces molecular modifications in B cells that can lead to lymphoma development.[1,12] Therefore, in addition to clinical, radiological, and histopathological examination, in such cases, serology must be examined.[4,6] In the present case, there was no additional medical history, and the HIV serology of the patient was negative.

The most common clinical symptom of DLBCL is rapidly growing swelling. Pain or local numbness is also often reported by clinicians. In most cases, the diagnosis can be delayed, because the lesions often mimic odontogenic pathologies; therefore, it is misdiagnosed as oral diseases, such as pyogenic granuloma, peripheral giant cell granuloma, endodontic lesion, or periodontal disease.[5,7,13] In the present case, the potential diagnosis was pyogenic granuloma following the literature. Therefore, the correct and early diagnosis and receiving appropriate medical treatment are important for prognosis. Moreover, this disease can be fatal without treatment.

Akarslan et al. reported a case report; their patients complaint of rapid swelling in the mandibular posterior edentulous region. Although the region is different from our case, the complaints of the patients are similar. (akarslan 14) At the same time, it has been reported in the existing literature that lesions occurring in the jaws generally have nonspecific symptoms such as painful or painless swelling, paresthesia, tooth mobility, and lymphadenopathy. In our case, the presence of regional swelling and lymphadenopathy is consistent with the literature. [15,16]

The first step of the treatment is a diagnosis of DLBCL based on histological tissue examination.The clinical presentation of the DLBCL can be similiar to the other conditions such as odontogenic inflammatory diseases therefore the diagnosis should be confirmed by histopathological examination.The gold standard for diagnosis is biopsy and all differential diagnoses should be ruled out by pathologic examination.General dentists has a critical role in early detection and prognosis of oral DLBCL; the diagnostic delay can effect the clinical stage.[1-9] The primary treatment includes chemotherapy depending on the clinical stage.[4,13] In such cases, chemotherapy can be combined with radiotherapy; even if the disease does not go into remission, patients can be considered for bone marrow transplant.[17] In the present case, following six courses of chemotherapy, and 2 years posttreatment follow-up period; the patient did not show any evidence of recurrence.

CONCLUSION

In conclusion, detecting DLBCL at an early stage is critical; dentists have a critical role in early diagnosis and avoiding delay in the treatment. All suspected oral lesions must be examined carefully. Attention must be given to radiographic signs, and all suspicious lesions should be sent for histopathological examination.

CONFLICT OF INTEREST STATEMENT

The authors confirm that they have no conflict of interest.

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