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CASE REPORT

An exceedingly rare entity: Mixed cellular type primary Hodgkin's lymphoma of the parotid gland

Son derece nadir bir durum: Parotis bezinin miks sellüler tip primer Hodgkin lenfoması

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ABSTRACT

Primary mixed cellularity Hodgkin's lymphoma of the parotid gland is extremely rare. We report here an 80-year old woman who presented with a painless preauricular mass of two months duration. Cytological and histomorphological findings were consistent with mixed cellularity Hodgkin's lymphoma. Due to the age and the presence of comorbid diseases, the patient only received radiotheraphy and has been in remission for 12 months since the initial diagnosis. Primary Mixed cellularity Hodgkin's lymphoma of the parotid gland is extremely rare and the prognosis, in addition to the biologic behavior of this disease is yet to be evaluated. *J Clin Exp Invest 2012; 3(4): 533-535*

Key words: Mixed cellularity Hodgkin's lymphoma, parotid, radiotheraphy

ÖZET

Parotis bezinin miks sellüler tip primer hodgkin lenfoması son derece nadir görülür. Biz burada 2 aydır olan ağrısız preaurikular kitle ile başvuran 80 yaşında bir kadın hastayı sunduk. Sitolojik ve histomorfolojik bulgular miks sellüler tip hodgkin lenfoma ile uyumlu bulundu. Yaş ve komorbid hastalıklarından ötürü hastaya sadece radyoterapi verildi. Hastanın, tanıdan itibaren 12 aydır remisyonda takibi devam ediyor. Parotis bezinin Miks sellüler tip primer hodgkin lenfoması son derece nadirdir ve bu hastalığın biyolojik davranışı ve prognozu araştırılmayı beklemektedir.

Anahtar kelimeler: Miks sellüler hodgkin lenfoma, parotis, radyoterapi

INTRODUCTION

Lymphoma is a malignancy of lymphoid tissues. The vast majority of lymphomas occur within lymph nodes. However, it can present in an extranodal site. Approximately 25% to 30% of cases of NHL and 1% of cases of HL will present as extranodal diseases. The majority of extranodal lymphomas occur in the gastrointestinal tract, and head and neck is the most common site. Walderyer's ring is the most common site of origin within in the head and neck. Lymphomas involving the parotid gland are uncommon; they only account for 0,6% to 5% of all neoplasm and/or tumor-like lesions involving the parotid gland. The vast majority of parotid gland lymphomas are NHL. Incidence of primary Hodgkin's lymphoma of the parotid gland is extremely rare [1-5] and most of the reported cases are of lymphocyte predominant subtype.[5] On the other hand, mixed cellularity type Hodgkin's lymphoma is exceptional with only seven cases reported up to date.[1-4] We report here, to the best of our knowledge, the eighth primary, mixed cellularity type Hodgkin's lymphoma of the parotid gland to contribute in part to a better understanding of the disease.

CASE REPORT

An 80-year-old woman presented with painless preauricular mass with two months of duration. Previous medical history was unremarkable. Physical examination revealed a mass measuring 30x30 mm size in the lower region of the right parotid gland. The patient denied night sweats or weight loss. The patient was afebrile and no cervical, axillary or inguinal lymphadenopathy or organomegaly was present. Radiological study of the chest, abdomen and other areas of the cervical showed no additional abnormalities. On computerized tomography, a solid lesion with hypodense areas in the center and contrast enhancing hyperdense areas at the periph-

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ery was observed. The lesion measured 30x20 mm. No abnormality was detected in bone marrow aspiration and bone marrow trephine biopsy.

Clinically, benign tumors of the salivary gland such as a mixed tumor were suspected. Fine-needle aspiration (FNA) revealed no epithelial cell component but lymphocytes and a small number of large multinucleated atypical cells which were highly suggestive of HL were noted [Fig. 1]. Subsequently, a superficial parotidectomy was performed. Grossly the specimen consisted of a parotid gland which measured 50×40×20 mm in size. In cut section a fish fleshy enlarged lymph node 30x20 mm was present in the normal parenchyma of the gland. Microscopic examination revealed a well-demarcated solid tumor without a fibrous capsule located in the parotid gland [Fig. 2]. The lesion was composed of a large number of eosinophils, plasma cells, lymphocytes and atypical mononuclear cells admixed with classic Reed-Sternberg cells [Fig. 3]. The sections were immunostained by streptavidin-biotin method with the following panel of antibodies: CD15 (Clone: Carb-3, DAKO), CD30 (Clone: Ber-H2, DAKO), CD 45 (Clone: Uchl-1, DAKO), CD20 (Clone: L26, Invitrogen). The classic Reed-Sternberg cells were positive for CD15 and CD30. Whereas, they were negative for CD45 and CD20. According to the criteria which are described given at the literature (Table 1), primary parotis gland lymphoma diagnosis was made.

With the findings above, a diagnosis of HL of parotid gland was confirmed and the tumor was classified as mixed cellularity type. The patient was classified as Stage IB and was treated with only radiotherapy and has been in remission for 12 months since the initial diagnosis.

Table 1. Criteria used to define primary parotid gland lymphoma.[4,6]

• Any lymphoma originating in either glandular lymph nodes or glandular parenchyma, regardless of its association with autoimmune disease or its subsequent stage: must be initial clinical manifestation of lymhoma
• Any lymphoma originating in glandular parenchyma as initial clinical manifestation of lymphoma
• Any lymphoma not associated with autoimmune disease, bening lymphoepithelial lesion, or myoepithelial sialadenitis
• Any lymphoma originating in glandular parenchyma not associated with autoimmune disease
• Any lymphoma originating either in glandular parenchyma or in glandular lymph node with invasion of parenchyma, in absence of detectable disease outside of parotid gland
• Any lymphoma originating in glandular parenchyma in absence of extraparotid involvement at time of diagnosis

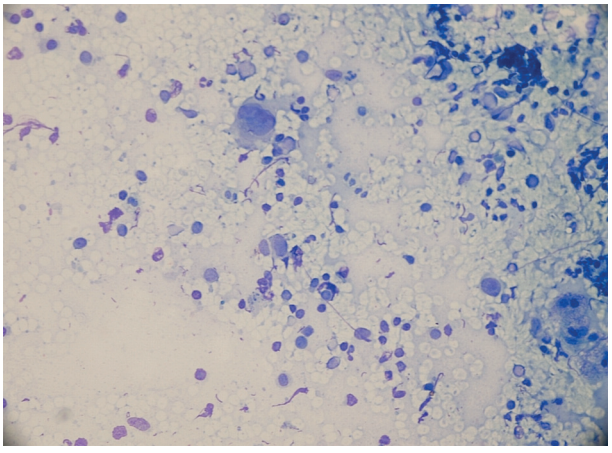

Figure 1. Fine needle aspiration shows a binuclear classic giant cell with many lymphocytes. (MGG,x400)

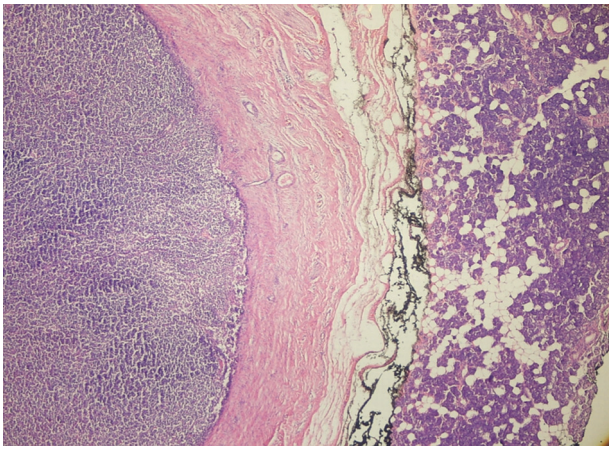

Figure 2. Tumour separated from the normal parotid tissue by a fibrous capsule. (H&E,X100)

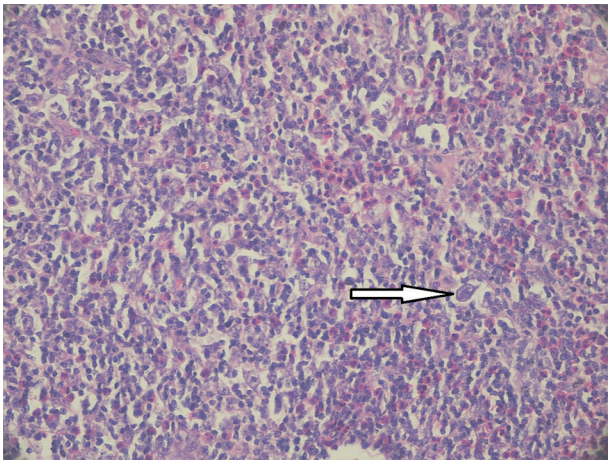

Figure 3. Histopathology of tumor showing Reed–Sternberg cells indicative of Hodgkin lymphoma. (H&E,x400)

DISCUSSION

Several criteria for a salivary gland lymphoma to be considered as primary has been reported up to date.[4] WHO defines a lymphoma of the salivary gland as primary only if the bulk of the tumor is in the gland and the parenchyma is involved.[5] Lymphoma accounts for 0.6-5% of all parotid gland tumors. Non-Hodgkin's lymphoma constitutes the vast majority of these cases (84%-97%). On the other hand, Hodgkin's lymphoma only accounts for 4% of all primary lymphomas of the salivary glands.[5]

Hodgkin's lymphoma of the parotid gland is most commonly of lymphocyte predominant type. Whereas, mixed cellularity Hodgkin's lymphoma of this region is exceptionally rare. We made a thorough search of the literature to determine the cases diagnosed as mixed cellularity type Hodgkin's lymphoma in parotid gland. Among the reports, in which the subtype of the Hodgkin's lymphoma was mentioned, we were able to determine only seven cases, with our case being the eighth one.[1-4]

The diagnostic accuracy of FNA in parotid gland masses is around 85-93.5%; However, due to the rarity of lymphomas in this region [3] and the possibility of not being able to see the classical Reed-Sternberg cells in FNA biopsies, the diagnostic accuracy of FNA in lymphomas is only 66%.[4] Some cases are overlooked and diagnosed as reactive lymph nodes in parotid gland or as Warthin's tumor.[4] Flow cytometry and immunohistochemical analysis are other diagnostic tools, but the definitive diagnosis, the decision of whether the lymphoma is nodal or parenchymal and subtyping can only be made by histological examination of the lesion.[1-4] In our case although the FNA slides were highly suspicious of a Hodgkin's lymphoma, the definitive diagnosis could be made by evaluating the histological sections.

Due to the rarity of the lesion it is not possible to determine the biologic significance and prognosis of these cases; however, it is suggested that the lymphomas of the parotid gland have a more favorable prognosis than the ones in other sites. Moreover, primary Hodgkin's lymphoma of the parotid gland has been reported to have a more favorable prognosis than non-Hodgkin's lymphomas.[4]

The treatment protocols for lymphomas of this region include chemotherapy and/or radiotherapy.[1,4]

In Hodgkin's lymphomas of the parotid gland stage and age are considered to have more impact on prognosis than the histological subtype.[4] However, coming up with a definitive conclusion on the prognosis and biologic behavior of different subtypes of this lesion does not seem to be possible before evaluating the data in larger series.

In conclusion, we reported here an extremely rare variant of mixed cellularity type Hodgkin's lymphoma primarily arising in the parotid gland with the hope that the case contributes to a better understanding of the disease.

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