

Case Report

Primary cutaneous lymphoma of scalp in a child: a case report

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ABSTRACT

Cutaneous lymphomas are a heterogeneous group of lymphoproliferative disorders with involvement of skin and form a separate group under Non-Hodgkin's lymphoma. Skin may be involved along with other organs but if the initial manifestation is in the skin, it is referred to as primary cutaneous lymphoma (PCL). One year eight months child brought with a scalp swelling of three months duration. Histopathology revealed a lymphoma and immunohistochemistry studies were positive for T-cell lymphoma. The case is presented due to the rarity of primary cutaneous lymphoma at the age of one year eight months.

Keywords: Scalp, Cutaneous, T-cell lymphoma

INTRODUCTION

Cutaneous lymphomas are a heterogeneous group of lymphoproliferative disorders with involvement of skin and forms a separate group under Non-Hodgkins lymphoma.¹ Non-Hodgkins Lymphomas constitute 6-10% of malignant neoplasms in children and second to GIT, the skin is the extra nodal site most commonly affected.² Lymphomas which involve only the skin without any other organ involvement are considered to be primary cutaneous lymphomas (PCL). They can only be considered as PCL when there is no evidence of any extra cutaneous involvement at the time of presentation.³ Majority are T cell lymphomas and have good prognosis.

CASE REPORT

A 20 months old female child was brought with a painless swelling on the right temporal side of scalp. The swelling was noticed by her mother when it was 1 cm diameter. Presently, swelling measured 8 x 6cm in size and it attained the size in three months. There was no history of trauma and no other significant symptoms. The child had normal milestones and was otherwise active.

On examination, there was a single, non-tender, well-circumscribed, firm swelling with restricted mobility on the right temporal aspect measuring 8x6cm. There was no surface ulceration. There was no organomegaly or palpable lymph nodes. The child was pallor. The hematological investigations showed the following: Hemoglobin: 8.8g/dl; Total leucocyte count: 5,200 cells/cubic mm; differential count was in the normal range and the erythrocyte sedimentation rate was 65 mm at the end of first hour. HIV status was non-reactive. CT scan showed a diffuse hyper dense mass of the scalp in the left parieto-temporal region, underlying bones are normal.

A biopsy was taken and subjected to histopathological examination. Grossly, the biopsy consisted of a single firm gray-white skin covered tissue fragment measuring 1 x 0.8 cm in diameter, processed completely.

Histopathology revealed dermal mass with sheets and nodules of small atypical lymphocytes (Figure 1). Nodules of tumour cells are separated by mild sclerotic stroma. Individual cells are small, round with scanty cytoplasm. Nuclei are round with finely dispersed chromatin. There is mild increase in mitotic activity - 2 to 4/10 HPF. Intervening stroma between the cells is scanty

with foci of perineural invasion. Skin adnexae are seen trapped in between the tumor cells and underlying subcutaneous fat shows tumor infiltration (Figure 2).

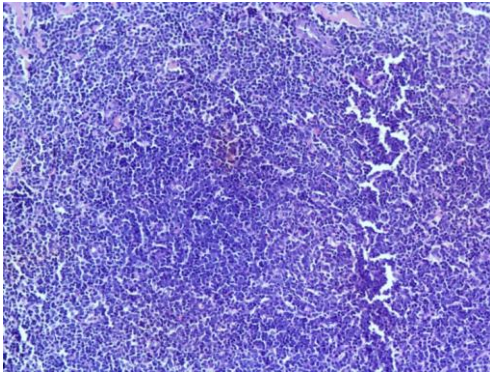


Figure 1: Monotonous sheets of small atypical lymphocytes (H&E 100x).

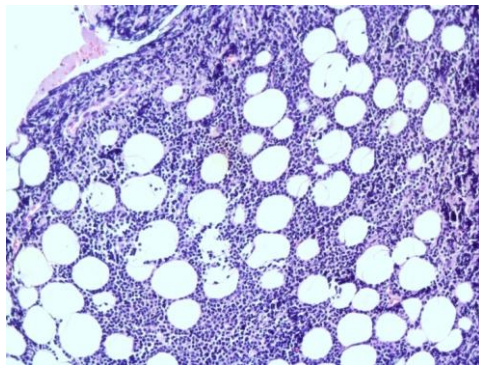


Figure 2: Tumor cells infiltrating into adjacent subcutaneous fat (H&E100x).

Immunohistochemical study revealed intense Leukocyte common antigen (LCA) and CD3 positive staining (Fig 3, 4) and CD20 and CD99 negative staining. Immunohistochemical profile in correlation with histopathology is suggestive of T Lymphoblastic lymphoma. Bone marrow aspiration and biopsy did not reveal lymphomatous infiltrate. The child is on chemotherapy and is doing well.

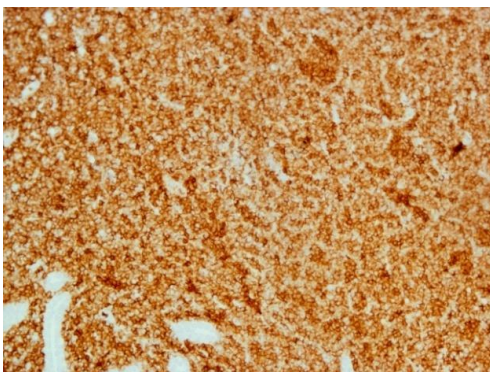


Figure 3: Immunohistochemistry showing intense positivity to LCA (100x).

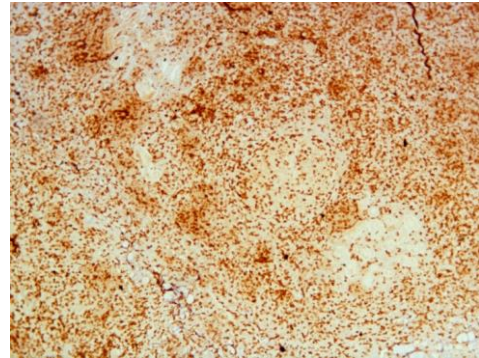


Figure 4: Immunohistochemistry showing intense positivity to CD-3 (100x).

DISCUSSION

Most primary cutaneous lymphomas involve head and neck region and PCL of scalp needs to be differentiated from primary malignant NHL of cranial vault which are associated with intra cranial extension.⁴ PCL extend outside the cranium first and hence present with scalp mass rather than any neurological signs.⁵ Skin is the second most common site of extra nodal lymphomas 65% are T-Cell lymphomas and 25% are B-Cell lymphomas and 10% are rare variants. Only 15-25% of cutaneous lymphomas show extra cutaneous manifestations at the time of diagnosis and prognosis is good.⁵

Cutaneous T-cell lymphomas constitute a heterogeneous group of lymphoproliferative diseases characterized by a clonal expansion of mature post thymic T-cells that infiltrate the skin. In relation to prognosis, patients with primary cutaneous lymphoma generally have a greater probability of disease-free survival than patients with secondary cutaneous lymphoma, although the histological and immunohistochemical features of the secondary skin lesions are identical to those of the systemic disease.

In our case the child had only a single swelling on the scalp with no erosion of the underlying bone and intra cranial extension. The child is on chemotherapy and is doing well.

A differential diagnosis of cutaneous T-cell lymphoblastic lymphoma should be considered in case of isolated cutaneous nodules in children as they are rare and have a good prognosis.

The case is being reported because of the rare incidence of primary cutaneous lymphoma in children.

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