Case Report

Unique differential diagnosis for a gluteal mass

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Abstract

Introduction: Non hodgkins lymphoma (NHL) of soft tissue and particularly the lower trunk are rare. We report a 67 year old female with a mass and pain in the left buttock. Computerized tomography (CT) and Magnetic resonance imaging (MRI) revealed it as a soft tissue mass infiltrating left gluteus minimus and involving the left iliac bone. Fine needle aspiration cytology (FNAC) was inconclusive. Incision biopsy revealed small cell non hodgkins lymphoma of B variety with CD45+ and high Ki67 activity. It is a systemic disease which is chemotherapy and radiotherapy sensitive.
Keywords: Soft tissue swelling, Differential Diagnosis, Biopsy, Sarcoma, Lymphoma.

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INTRODUCTION

True primary NHL in the soft tissue of the extremities represents 0.11% of all malignant lymphomas. They mimic soft tissue sarcoma. However both should be differentiated as treatment and prognosis vary vastly.

CASE REPORT

A 68 year old woman presented with a one month history of a left sided gluteal swelling and pain of the same area of two weeks duration. The patient had no other complaints, no comorbid conditions, no significant past history. Physical examination revealed an adequately nourished woman with no abnormalities on systemic examination. No generalized lymphadenopathy. Local examination revealed a tender left gluteal swelling of 12cm x 8cm x 6cm with firm consistency and restricted mobility. Skin over swelling was pinchable. There were no signs of inflammation. FNAC was inconclusive. Hematological workup revealed a hb 8.9g/dl, platelets 3 x 10 to power of 5/mm3, wbc count 4120 cells/mm3, albumin 3.5 g/dl, LDH normal, normal LFT, normal RFT, alkaline phosphatase of 288 u/l and reactive hyperplasia in bone marrow. MRI in dicated an abnormal T2 hypertense signal in the left illiopsoas muscle, left obturator internus, gluteus minimus, pyriformis, part of gluteus medius. The mass is seen eroding the left illium with decreased signal in rest of ilium. Features suggestive of soft tissue sarcoma. The initial diagnosis was soft tissue sarcoma. Incision biopsy was done under local anaesthesia. Histopathological diagnosis was revealed as NHL of soft tissue, B cell variety. It was strongly positive for CD45, CD20 and CD99 was weakly positive. Vimentin was positive. Ki67 activity was 80%. There were many mitotic figures. Therefore the diagnosis of high grade small B cell lymphoma was made. Patient was staged as 4A (Cotswold's staging/modified Ann Arbor). She was referred to hemato oncology and was initiated on CHOP chemotherapy regimen i.e. (cyclophosphamide, adriamycin, vincristine and prednisolone).

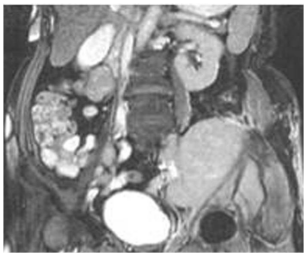

Figure 1:

DISCUSSION

Malignant lymphoma can occur in any anatomical region. Primary extranodal NHL is called so when the extranodal site is the only site involved or when the bulk of the disease is confined to the extranodal site[2]. The most common extranodal sites include the gastrointestinal tract, Waldeyer's ring, head and neck, testes, ovary, central nervous system, thyroid, breast, bone and skin, in order of decreasing frequency (3-13).True primary NHL in the

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soft tissue of the extremities represents 0.11% of all malignant lymphomas[1]. Symptoms are nonspecific and may cause consideration of other differential diagnosis like sarcoma. Due to low incidence, a management protocol for primary soft tissue non-Hodgkin lymphoma has not been clearly put forth. MRI is considered superior for evaluation of soft tissue tumors compared with CT (14-15). Lee *et al* recommend that, at MR imaging, if a large soft-tissue mass with normal adjacent bone marrow or a mass more extensive than the adjacent bone marrow abnormalities that affects a long segment of an extremity with diffuse muscle involvement is observed, and there is the presence of subcutaneous stranding or extension, the differential diagnosis should include primary soft tissue lymphoma in the absence of a history of trauma or infection. CT is needed for the detection and staging of lymphoma. CT enables accurate measurement of both the size and extent of the tumor, and provides information to determine appropriate therapy and response to treatment. The diagnosis of lymphoma should be based on the histo-logical examination. There are cases in which biopsy specimens are difficult to acquire; wherein fine-needle aspiration cytology (FNAC) becomes an acceptable alternative with good accuracy. The usefulness of FNAC in the differential diagnosis of soft tissue tumors has been discussed. Since the main disadvantage of FNAC is that it does not yield information about tumor tissue architecture, histology is preferable. Therefore, in the guidelines of National Comprehensive Cancer Network (NCCN), FNAC is not recommended for the diagnosis of NHL. On account of FNAC being a primary diagnostic tool for all soft tissue tumors, a differential diagnosis of lymphoma should always be kept in mind for other small round-cell malignant tumors. Such cases require biopsy confirmation and immune phenotyping for further subtyping. The presence of an intense soft tissue mass on higher imaging, particularly in a middle- or older-aged patient, is highly suggestive of lymphoma. Considering the sensitivity to chemotherapy and radiotherapy, amputation of the extremity is not optimal for lymphomas. FNAC is seldom adequate to establish diagnosis. Biopsy of the mass and histopathology are essential to distinguish lymphoma from other malignant round-cell tumors. Early recognition and correct diagnosis will initiate appropriate treatment.

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