CASE REPORT

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Primary infradiafragmatic bony classical Hodgkin lymphoma

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Abstract

Infradiaphragmatic Hodgkin's lymphoma (IDHL) is a scarce neoplasm and primary pelvic bone exhibition is limited to case reports. Recognition and management of likewise a rare disease are challenging. Here the authors present a peculiar case of classic Hodgkin lymphoma (CHL) of pelvic bone. A 31year-old man was admitted to our hospital with chief complaint of left hip pain. Imaging showed a lytic lesion in the left iliac bone with sclerotic margin and extension to soft tissue. Open biopsy confirmed the diagnosis of CHL. CHL at first introducing as pelvic bone involvement is really uncommon. The diagnosis of primary bone CHL should be made by tough histological and clinical expression.

Keywords: Classical Hodgkin lymphoma, Bony Hodgkin lymphoma, Infradiafragmatic.

INTRODUCTION

Hodgkin lymphoma includes a specific group of tumors that are defined by the attendance of a tumor giant cell, the Reed–Stenberg cells cell. In late stage HL, bone involvement has been detected in 10% to 20% of patients [1]. However, primary bony HL really exists and just very rare literatures presented [2-5]. Recognition of single bone involvement in HL cases as "primary" is difficult as the diagnosis of primary bony HL should be confirmed according to histological and clinical presentations. Indeed primary bony HL is an early stage disease, but secondary bone involvement demonstrates a progressive one. IDHL counts for 3-11% of adult patients of early stages of Hodgkin lymphoma [6], here we present a 31year-old man with a left pelvic involvement which confirmed to be classical HL.

CASE REPORT

A 31year-old man was referred to our hospital with a chief complaint of 8 months of left hip pain. The patient reported a history of night sweats, low-grade fever, and approximately 7 % weight loss during the past 6 months. Also, he discovered a lump in his left hip during the latter month. Physical examination suggested the compaction of sciatic nerve. Lab data revealed that the WBC (white blood cell) count was 15×10^9 L with the neutrophils rate of 60% and lymphocyte rate of 40%, Hb was 95g/L, platelet count was 250×10^9 L. Epstein-Barr virus test was not done. Bone marrow aspiration showed a normocellular marrow with mild eosinophilia. A Coronal and axial pelvic CT scan show a lytic lesion in the left iliac bone with sclerotic margin and extension to soft tissue (Fig.1) To determine the histopathology of the mass and give a therapeutic design, an open biopsy was done. The specimen sent to the pathology ward and H&E stained slides showed polymorphic inflammatory cell infiltration. Inflammatory infiltration was composed of reactive lymphocytes, eosinophils and plasma cells. In this reactive cellular background, scattered multilobated and mononuclear Reed–Stenberg cells and lacunar cells were detected. Immunohistochemistry was confirmatory; the large atypical cells were positive for CD15, CD30 and negative for CD20 (Fig. 2 and 3). The histopathology was consistent with a diagnosis of CHL. CT of the neck, chest, and abdomen revealed no evidence of the cervical, mediastinal, or retroperitoneal lymph nodes involvement. After consulting with hematologists a treatment protocol of ABVD ICE chemotherapy was performed

for this patient. Then he refered to radiotherapy center.

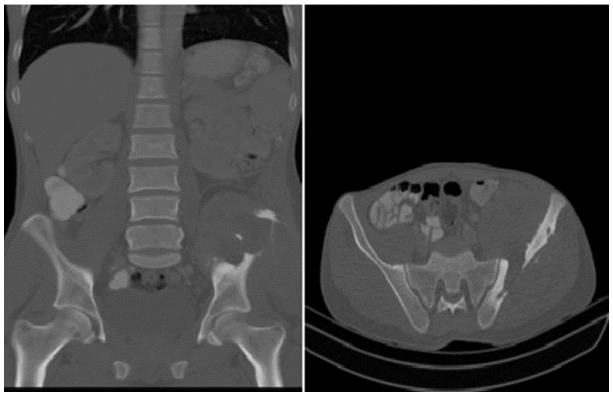

Figure 1: A Coronal and axial pelvic CT scan show a lytic lesion in the left iliac bone with sclerotic margin and extension to the soft tissue.

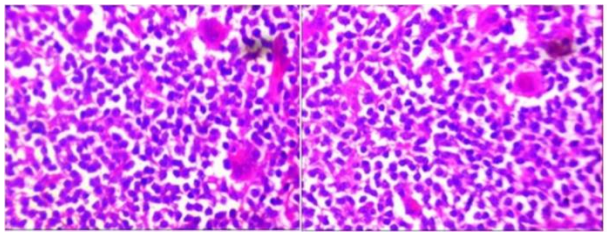

Figure 2: Sections show among reactive cellular background, scattered multilobated Reed–Stenberg cells and lacunar cells are detected (H&E stain X 40).

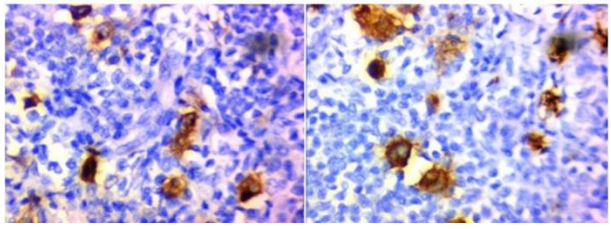

Figure 3: Neoplastic cells are positive for CD15 (left panel) andCD 30(right panel) (IHC stain X40).

DISCUSSION

As a matter of fact, HL involves the lymph nodes at one or more anatomical location. Bony entanglement in HL occurs through hematogenous spread or direct spread from the adjacent involved lymph node. Primary IDHL has been reported in 4–13% of patients [7]. Literature review showed primary pelvic HL is limited to adults [4, 8]. Our patient was a 31 year old man. It is claimed that primary bony HL most frequently involve spine or long bone, and pelvic involvement is rare [2, 4]. The present patient revealed pelvic bone involvement as a presenting symptom. Histologically, CHL has common features with other CD30 positive neoplasms such as primary mediastinal large B-cell lymphoma (PMBCL) and gray zone lymphoma. Hoeller *et al* showed that BOB.1, CD79a, and cyclin E are useful immunohistochemical markers that can assist recognizing CHL from PMBCL [9]. In addition, primary bony HL may be one differential diagnosis of other osseous neoplasms. For example, the primary diagnosis of Hodgkin lymphoma was malignant fibrous histiocytoma in one study [10]. The clinical presentation and imaging findings can be similar to other pelvic sarcomas such as chondrosarcoma, Ewing sarcoma, osteosarcoma sarcoma, and malignant fibrous histiocytoma [11]. Again histopathologic and IHC findings are crucial. In addition, treatment modality has clear distinction between CHL and other pelvic sarcomas [12]. Several specifications of IDHL compared with supradiaphragmatic HL have been explained. These include the older age, males' predominance and more frequent unflavored histology. On the other hand, Cédric Rossi, Morgane Mounier *et al*. suggest that the prognosis in PET-CT-staged IDHL may be similar to that in SDHL [13]. Some studies showed that patients with primary bony HL treated with combined-modality therapy were found to have a longer survival than patients who underwent single modality [14, 15]. Chemotherapy is yet the principle treatment choice for bony HL patient. Surgical approach is required just when there is a high risk of pathological fracture.

CONCLUSION

CHL at first presenting as pelvic involvement is actually scarce. The correct diagnosis should be made by tough histological and clinical manifestations.

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