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Massive Bone Lytic Lesion In Acute Lymphoblastic Leukemia (ALL) Associated with Lymphoma of the Bone

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Abstract : Osteoporosis in children is rare and usually secondary to an underlying disease process. Most of the reported bone fracture incidences associated with acute lymphoblastic leukemia occur during the course of the chemotherapy, not at the point of the first symptoms of leukemic disease, as happened with the case presented here.
Keywords: Massive Bone Lytic Lesion, Lymphoblastic Leukemia, ALL, Lymphoma, bone.

Introduction and Background

Osteoporosis in children is rare and usually secondary to an underlying disease process whose diagnosis may be difficult to detect. Rarely, it can be a manifestation of acute lymphoblastic leukemia. Most of the reported bone fracture incidences associated with acute lymphoblastic leukemia occur during the course of the chemotherapy, not at the point of the first symptoms of leukemic disease, as happened with the case presented here. And this osteoporotic fracture related with Non-Hodgkin Lymphoma.

Case

A 10-year-old girl was admitted to our hospital with pain on both of her upper and lower extremities. It had been happened since 4 months before she was admitted to hospital. On clinical examination, swelling, deformity was found on all of the extremities. X-ray of the bone revealed osteolytic lesion with pathologic fractures in all of the bone of her body except the spine. A bone marrow aspiration confirmed a diagnosis of Acute Lymphoblastic Leukemia (ALL). Histopathologic appearance show sheets to clusters of small to large lymphocytes, with variable nuclear and cytoplasmic features, are typically seen, and immunohistochemistry confirmed that this is the Lymphoma of the bone.

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Discussion

Acute lymphoblastic leukemia (ALL) are the most common malignancies in children. Most of the reported bone fracture incidences associated with acute lymphoblastic leukemia occur during the course of the chemotherapy, but not for our case. Our case present with multiple bone lytic lesion and fracture since initially before chemotherapy for ALL. In our case, we found that so massive lytic lesion in whole entire of the bone and almost all of the bone of the body except the spine. It is unusual appearance for bone lesion due to leukemia condition or lymphoma of the bone. Although lymphoma is a common neoplasm of the pediatric, but we can not find any relation between Leukemia condition associate with lymphoma. The pathogenesis of bone lesions caused by lymphoma is still unclear, and cause bone destruction. We think that this is a rare case of a leukaemic ALL presenting with multiple massive bone lesion with pathological fracture associated with Lymphoma of the Bone.

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