A very rare case of transformation of a patient with Multiple Myeloma to NonHodgkin malignant lymphoma

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A rare case of transformation of Multiple Myeloma to non-Hodgkin's lymphoma is presented. The patient presented in 2013 with mid-back and rib pain. In an abdominal CT performed, the patient resulted with osteolitic lesions in the vertebrae and hip bone. Bone marrow aspiration demonstrated a presence of 15% atypical plasma cells. He was diagnosed with stage III A Multiple Myeloma. After 5 years of remission from Multiple Myeloma he came back to the clinic with a scrotal mass that after the bipsy resulted to be a Large B Cell diffuse Lympohoma

Introduction

Multiple myeloma (MM) is the major malignancy of plasma cells. Although lymphomas are usually neoplasms of lymphatic tissues, substantial numbers of non-Hodgkin's lymphoma arise in other tissue.The transformation of Multiple Myeloma to non Hodgkin malignant Lymphoma is very rare. We report a case of a patient presented with this transformation and we discuss the possible pathogenetic mechanism of the two disorders.

Case report

A 32-year-old man presented in 2016 with mid-back pain and rib pain during the last 2 months. On examination he appeared normal.. Complete blood count revealed hemoglobin 8.0 g/dl,total protein of 10.5 g/dl. Abdominal CT revealed olsteolytic bone lesions in the vertebrae, scull and pelvis. Serum electrophoresis revealed a monoclonal peak in the gamma globulin region, identified IgA lambda on immunoelectrophoresis. Bone marrow aspiration smears revealed 15% o plasma cells. The patient was diagnosed with stage III A Multiple Myeloma. After treatment with eight cycles of chemotherapy according to VAD protocol the patient was discharged from the hospital in complete remission.

Two years later, in march 2018 the patient comes back to the consultation clinic a mass with an Biopsy examination showed Large diffuse B cell lymphoma Cd20 neg with positive CD45 ++- CD79a +++ and Ki67 80%. Bone marrow aspiration showed no presence of plasmatic cells.The patient was diagnosed with non Hodgkin malignant lymphoma We treated the patient according DHAP chemotherapy regimen . After the chemotherapy protocol we performed a CT scan cause we do not have access to PET/CT scan ,the patient was in complete remission .

Discussion

Multiple myeloma (MM) is the major malignancy of plasma cells. Although lymphomas are usually neoplasms of lymphatic tissues, substantial numbers of non-Hodgkin's lymphoma arise in other tissue,

The occurrence of both MM and NHL in our patient implies several possible pathogenetic mechanisms. First, one malignant disease may evolve from another. A comparison of the immunologic phenotype of both MM and NHL in a patient is needed to reach meaningful conclusions. On the other hand, the development of high grade malignant lymphoma in patient with chronic lymphocytic leukemia was first reported by Richter in 1928 and transformation to high grade lymphoma is now a well-known event in other low grade malignancies of the B cell lineage. The malignant transformation of MM has rarely been reported. During the last decade, patients with advanced MM survive longer due to intensified chemotherapy and improved supportive care. This increased survival has permitted the development and improved the chance of observing transformation of MM to high grade malignant lymphoma. It is possible that cytotoxic treatment per se may promote transformation. Another possible mechanism is that both malignancies are different manifestation of original neoplastic clone. Although it would be rare, a possibility of independent of two infrequent malignancies at one time exists.

This as the only case of MM patient transformation to NHML offers additional support to the theory of malignant transformation of MM to NHML. Opportunities to study and understand the unique natural history and evolutional dynamics for this transformation are rare. We would recommend further multicenter comparisons of slimilar cases in a broad effort to better define this complicated disease process.