OP 02

Blinatumomab therapy in a relapsed acute lymphoblastic leukemia with isolated radius involvement following allogeneic bone marrow transplant: a case report

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Introduction: Treatment of relapsed acute lymphoblastic leukaemia after allogeneic bone marrow transplant can be challenging to clinicians and have a grim prognosis. Relapse sites other than bone marrow are generally central nervous system and gonads. Blinatumomab is a bi-specific T-cell engager(BiTE) antibody that mainly targets leukemic cells CD19 protein. Blinatumomab is effective in relapsed ALL with medullary involvement but in extramedullary relapsed setting its activity is not well-know. Here, we report an effective treatment with blinatumomab in a case of acute lymphoblastic leukaemia that recurred with isolated bone involvement after allogeneic bone marrow transplantation (ABMT).

CASE: A 20-year-old woman diagnosed with a Philadelphia chromosome-negative precursor B cell ALL and remission achieved with HyperCVAD/MA regimen. While in remission after two cycles of HyperCVDAD/MA regimen, 100% compatible sibling donor allogeneic bone marrow transplant was performed. İmmunosupresive therapy continued after six months of a transplant due to chronic GVHD that affects eye and skin. The patient presented with pain in the right elbow three years after the transplant. F-18 fluorodeoxyglucose (FDG) positron emission tomography/computed tomography (PET/CT) imaging revealed increased signs of FDG uptake in the right radius. There was no recurrence in aspirate and biopsy from the iliac bone marrow. In the biopsy taken from the right radius, leukemic cell infiltration was detected. Blinatumomab therapy was started. No side effects were observed. After two cycles of blinatumomab therapy, pet/ct showed total metabolic response and remission.

Discussion: In acute lymphoblastic leukemia, Blinatumomab therapy may be an effective salvage treatment in patients with extramedullary relapse.

Keywords: Relapsed acute lymphoblastic leukemia, blinatumomab, allogenic bone marrow transplantation.

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CHRONIC LEUKEMIAS

OP 03

Cardiovascular risk reduction in chronic myeloid leukemia patients treated with the tyrosine kinase inhibitors

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Objective: To identify factors that should be taken into account for the assessment of the necessity the cardiovascular (CV) risk reduction for chronic myeloid leukemia (CML) patients treated with BCR-ABL1 tyrosine kinase inhibitors (TKIs) in the decision making for strategy prevention.

Case report: CV risk reduction is an important consideration in patients with CML based on the necessity to improve prognosis in such a group of patients. The success and high effectiveness of TKIs have increased the focus on survivorship and late toxicity include CV toxicity in CML patients. Survivorship in CML patients depends on CV disease prevention, given its prevalence in the general population. The separate clinical guidelines for CML patients treated with TKIs for CV risk reduction are absent in clinical practice.

Methodology: We observed clinical trials expected TKIs effectiveness and toxicity (we especially focused on cardiotoxicity and hepatotoxicity), clinical guidelines on CV disease prevention for the general population. We also analyzed TKIs and HMG-CoA reductase inhibitors biotransformation, drug-drug interaction TKIs and HMG-CoA reductase inhibitors.

Results: TKIs demonstrated high effectiveness in CML patients based on the published clinical trials. Nilotinib and ponatinib have been linked to the development of vascular occlusive events, CV disease. Type 2 diabetes mellitus development can be associated with nilotinib treatment and as a result, could enhance CV disease. Dasatinib has been associated with pleural/pericardial effusions and pulmonary hypertension. Dasatinib based on clinical trial data is the most liver safe TKI, bosutinib, nilotinib, ponatinib have higher risks of hepatotoxicity in CML patients (ENESTnd trial, BELA Trial, DASISION trial, PACE study). The individual CV risk of the patient and the necessity of CV risk reduction should be based on the personal scores assessment with the cardiac risk score calculator, ASCVD algorithm based on the clinical guidelines on CV disease prevention for the general population. TKIs for CML treatment is the group of drugs that required liver biotransformation through CYP 3A4 cytochrome enzyme and are the inhibitors of CYP 3A4. Atorvastatin and simvastatin are required liver biotransformation with the CYP 3A4. Rosuvastatin and pravastatin are not required CYP 3A4 for their