Adult Hematology Abstract Categories, Stem Cell Transplant

OP 08

FLUDARABINE-INDUCED BRADYCARDIA IN ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION

Serhat Çelik [1], Zeynep Tuğba Güven [2], Abdullah Altınsoy [3], Şaziye Esra Tubay [4], Muzaffer Keklik [5], Ali Ünal [5]

[1] *Department of Hematology, Yenimahalle Training and Research Hospital, Yıldırım Beyazıt University, Ankara, Türkiye*
[2] *Department of Hematology, Adana City Hospital, Adana, Türkiye*
[3] *Department of Internal Medicine, Faculty of Medicine, Erciyes University, Kayseri, Türkiye*
[4] *Department of Clinical Pharmacy, Faculty of Pharmacy, Erciyes University, Kayseri, Türkiye*
[5] *Department of Hematology, Faculty of Medicine, Erciyes University, Kayseri, Türkiye*

Objective: Fludarabine, a purine analog, is getting more attention with the increasing use of reduced intensive conditioning regimens in allogeneic hematopoietic stem cell transplantation (allo-HSCT). Bradycardia was observed in only a few cases reported in the literature. In clinical practice, bradycardia can be asymptomatic or cause syncope and cardiac arrest. This study aimed to evaluate the bradycardia side effect of fludarabine used in allo-HSCT recipients and to increase awareness of this issue. **Methodology:** This retrospective study included 73 patients who received fludarabine in the allo-HSCT conditioning regimen between January 2015 and January 2021. Patients with and without bradycardia were compared regarding demographic data, allo-HSCT characteristics, electrolyte values, fludarabine administration dose and duration, and survival. Univariate and multivariate analyzes were performed to evaluate independent predictors for fludarabine-induced bradycardia (FİB). **Results:** Fludarabine doses were higher in the bradycardia group, but not statistically significant. Age was the only independent predictor of FİB (OR 0.93, 95% CI: 0.89-0.98, p =0.007). The median age in the group with bradycardia was 19 years younger than those without bradycardia (34 (19-49) vs 53 (19-69), p=0.005). In 11 (84.6%) of the patients who had bradycardia, bradycardia improved with the discontinuation of fludarabine alone, but atropine was administered in 2 (15.4%) patients. **Conclusion:** Bradycardia was observed in 17.8% of our patients who used fludarabine in the conditioning regimen. Age was the only independent predictor of fludarabine-induced bradycardia; therefore, close heart rate monitoring is recommended during fludarabine administration, especially in younger patients. Although our results are promising, further studies evaluating the fludarabine intermediate fluoroadenosine are needed to support our results.

https://doi.org/10.1016/j.htct.2024.04.010

Adult Hematology Abstract Categories, Other Diseases

OP 09

A STRATEGY FOR DIRECT DELIVERY OF ANTIGENIC CONSTRUCTS TO DENDRITIC CELL RECEPTORS

Anzhelika Melnikova, Tatiana Mushkarina, Lyudmila Grivtsova

A. Tsyb Medical Radiological Research Centre - branch of the National Medical Research Radiological Centre of the Ministry of Health of the Russian Federation, Obninsk, Russian Federation
Presentation Type Oral

Objective: C-type lectin receptors (CLRs) expressed by DC are considered attractive targets for effective targeting of antigen to antigen-presenting cells, since the participation of CLRs can additionally stimulate antigen presentation and, accordingly, subsequent activation of T cells. To study the ability of DC to enhance antigen capture and presentation using a library of fluorescein-labeled polyacrylamide glycoconjugates. **Methodology:** DC was obtained by culturing human peripheral blood monocytes in a complete RPMI-1640 nutrient medium containing GM-CSF, IL-4 and TNFa. Immunophenotypes were analyzed using flow cytometric analysis. In our study, synthetic FSL (Function-Spacer-Lipid) constructs will be used: polyacrylamide glycoconjugate (Adi-sp)3-βDD-PAA-Fluo, conjugate N-acetyllactosamine, glycolipid (Adi-sp)3-βDD ((Adi-sp)3-βDD-DOPE). Next, the binding of these cells to glycoprobes was investigated. **Results:** A new class of glycoconjugates specific for binding to C-type lectin receptors has been synthesized. The key cytokines for the cultivation of DC are GM-CSF (final concentration 80 ng/ml), IL-4 (final concentration 10 ng/ml), as well as differentiation inducers: TNF-α, PGE2. Mapping of human blood cells using a library of fluorescein-labeled polyacrylamide glycoconjugates showed that the studied glycoprobes bind to more than 15% of the human leukocyte population. **Conclusion:** In our proposed research project, a new approach will be used to study the strategy of enhancing the capture and presentation of antigen by dendritic cells by targeting C-type lectin receptors.

https://doi.org/10.1016/j.htct.2024.04.011

OP 10

SHIFTING PARADIGMS: EXPLORING ENARODUSTAT FOR ANEMIA IN CHRONIC KIDNEY DISEASE IN A META ANALYSIS OF RANDOMIZED CONTROLLED TRIALS

Lokman Hekim Tanrıverdi [1], Ahmet Sarıcı [2]

[1] *Section of Hematology, Department of Internal Medicine, Faculty of Medicine, İnönü University, Malatya, Türkiye*
[2] *Department of Medical Pharmacology, Faculty of Medicine, İnönü University, Malatya, Türkiye*

Objective: Anemia commonly accompanies chronic kidney disease (CKD). Erythropoiesis-stimulating agents (ESAs), such as darbepoetin, are initiated for anemia in CKD. Additionally, hypoxia-inducible factor (HIF) prolyl hydroxylase inhibitors have demonstrated efficacy in treating CKD-associated anemia. This meta-analysis aims to compare the efficacy, safety, and tolerability of enarodustat in anemic CKD patients. **Case report Methodology:** A systematic search of Cochrane CENTRAL, Ovid Medline R, PubMed, and Web of Science databases up to March 1, 2024, was conducted. Randomized controlled trials (RCTs) directly comparing enarodustat with darbepoetin were included. Data from four unique RCTs comprising an inverse variance-weighted random-effects model were utilized for the main analysis. Primary efficacy outcome measures included hemoglobin (Hb) change at weeks 4-6 and during follow-up, while primary safety outcomes focused on serious adverse events (SAEs). Subgroup analyses were performed based on dialysis status and prior use of ESA for the primary outcome. **Results:** Four RCTs with 7 reports involving 586 patients were included in the main analysis. Enarodustat demonstrated superiority to control in terms of change in Hb levels at week 4-6 (RR 0.76, 95% CI 0.02 to 1.50, I2=96%, p=0.04) but non-inferiority during follow-up (MD 0.66, 95% CI -0.22 to 1.53, I2=91%, p=0.14). Enarodustat exhibited comparable effects for safety and tolerability parameters such as SAEs (RR 1.17, 95% CI 0.72 to 1.91, I2=0%, p=0.52), any adverse events (RR 0.95, 95% CI 0.82 to 1.08), any adverse events leading to discontinuation (RR 0.90, 95% CI 0.37 to 2.20), diarrhea (RR 1.50, 95% CI 0.05 to 43.15), hypertension (RR 0.89, 95% CI 0.43 to 1.84), and all-cause mortality (RR 0.63, 95% CI 0.08 to 5.08). Subgroup analysis by dialysis status revealed nonsignificant differences for change in Hb levels at week 4-6 and during follow-up, but comparator-based subgroup analysis demonstrated a significant difference only when comparing to placebo at week 4-6. **Conclusion:** Enarodustat exhibits promise as a treatment option for anemia associated with CKD, demonstrating superiority to control in terms of Hb change at week 4-6 and non-inferiority during follow-up. Moreover, it demonstrates comparable safety and tolerability profiles to darbepoetin, making it a potential alternative in the management of CKD-related anemia.

https://doi.org/10.1016/j.htct.2024.04.012

OP11

A VERY RARE RELAPS TYPE IN MULTIPLE MYELOMA: LEPTOMENGEAL AND CRANIAL INVOLVEMENT

orhan Ayyildiz *, Songul Beskisiz, Abdullah Karakus

Dicle University Hospital, Department of Hematologyi Diyarbakir

Case report: Multiple myeloma is a hematological malignancy that develops as a result of clonal proliferation of plasma cells and progresses with remissions and relapses. It is clinically characterized by many symptoms and signs such as osteolytic bone lesions, hypercalcemia, renal dysfunction, hypergammaglobulinemia and anemia. However, involvement of the central nervous system, especially the leptomeningeal/cranial region, is a rare and prognostically important form of relapse of the disease. Nervous syste

https://doi.org/10.1016/j.htct.2024.04.013

Adult Hematology Abstract Categories, Stem Cell Transplant

OP 12

Can autologous stem cell transplantation be a treatment option in a patient diagnosed with secondary progressive multiple sclerosis?:Case report

Kemal Fıdan, Gülşah Akyol, Ali Ünal

Erciyes University Faculty of Medicine, Department of Internal Medicine Hematology, Kayseri, Türkiye

Case report: İntroduction: Multiple sclerosis (MS) manifests itself with plaque formation as a result of defensive T and B cells in the immune system perceiving the myelin sheath around nerve cells as a foreign substance to the body and trying to destroy it, for an unknown reason.In short, it is an autoimmune inflammatory demyelinating disease of the central nervous system. In multiple sclerosis, various interventions such as medication, physical therapy, and stem cell therapy are used to improve patients' quality of life. The goal of autologous hematopoietic stem cell transplantation (AHSCT) is to eliminate and replace the patient's pathogenic immune system to achieve long-term remission of MS. Here, we will present our experience with autologous stem cell transplantation performed in our center for an MS case that had previously received both medical and physical therapy and failed to respond.

Key words: multiple sclerosis, autologous stem cell transplantation

Case report: The 41-year-old male patient was diagnosed with MS in 2012 and has been wheelchair-bound for about 3 years. Glatiramer acetate was started at the time of diagnosis. As the patient's complaints increased, fampridine and ocrelizumab treatments were given, respectively. The patient, who did not respond to treatment, was evaluated as having secondary progressive MS and an autologous stem cell transplant was planned. Mobilization was performed with cyclophosphamide + G-CSF in July 2023. In September 2023, AHSCT was performed with cyclophosphamide (40 mg/kg, 2400 mg in total, 5 days), Mesna (40 mg/kg/day, 2400 mg in total, 5 days) and ATG (360 mg in total) protocol. The patient, who had platelet engraftment on day +9 and neutrophil engraftment on day +11 after AHSCT, was discharged with outpatient clinic control. **Discussion and conclusion:** Despite many advances in MS treatment, there is still no definitive treatment answer. Autologous hematopoietic stem cell transplantation may be promising, as observed in several studies. The aim of AHSCT is to eliminate and replace the patient's pathogenic immune system to ensure long-term remission of