Reply to the Authors:

To the Editor,

We thank Drs. Sookaromdee and Wiwanitkit for their interest and contribution to our article. There is a growing evidence of renal dysfunction in patients with thalassemia. Although the process is multifactorial (the disease itself with regular transfusion, iron accumulation in the parenchyma and toxicity of chelators), oxidative stress seems to be the main mechanism of renal damage. Several studies have shown the beneficial effects of antioxidants (curcumin, glutamine) in prevention of chemotherapy-induced nephrotoxicity by decreasing oxidative damage. Considering the significantly increased life expectancy of thalassemia patients with long-term complications, we think the role and effects of antioxidant treatments in routine follow-up of the thalassemia patients should be investigated in prospective studies.

Best Regards

Zeynep Karakaş, Serap Karaman

Use of Plerixafor to Mobilize a Healthy Donor Infected with Influenza A

İnfluenza A ile Enfekte Olan Sağlıklı Bir Vericinin Plerixafor ile Mobilizasyonu

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To the Editor,

The combined use of plerixafor and granulocyte-colony stimulating factor (G-CSF) improves mobilization in poor mobilizers. However, there are limited data available on the use of plerixafor in healthy donors [1,2]. The effects of influenza A infection on stem cell mobilization are not known.

A 46-year-old male was selected as an HLA-matched donor for a patient diagnosed with acute myeloid leukemia (AML). Donor assessment was performed in accordance with the standard operating procedure prepared for JACIE (SOP: BMT-CU-006, Donor Assessment and Safety). The donor was given 10 mg/kg/day G-CSF. He developed a dry persistent cough, chills, fever of 39 °C, fatigue, and flu-like symptoms on day 3 of G-CSF administration. The donor was considered to have an upper respiratory tract infection, which could not be attributed to only G-CSF administration. The family members of the donor were found to have similar symptoms. Thus, blood and urine cultures were obtained and he was started on levofloxacin in addition to paracetamol; G-CSF was continued. A respiratory tract virus panel was performed on a nasal smear using a PCR-based technique. The peripheral blood leukocyte count was 22,000/μL but CD34+ cells represented just 0.07% of all cells (11/μL) on day 5 of G-CSF administration; this was considered to reflect "poor mobilization". Therefore, 0.24 mg/kg plerixafor was administered "just in time," in addition to G-CSF, on night 5, after the donor had been given all necessary information and informed consent had been obtained. Two hours after the 11th dose of G-CSF, the leukocyte count was 45,000/μL, of which 0.33% (148/μL) were CD34+ cells. Peripheral stem cell apheresis was performed using the Donor Spectra Optia Apheresis System (Terumo BCT, Lakewood, CO, USA). A total of 15.20x10^8 nuclear cells/kg were collected. The product contained 3.92x10^6 CD34+ cells/kg, 14.91x10^7 CD3+ cells/kg, 17.36x10^7 CD19+ cells/kg, and 7.17x10^7 CD56+ cells/kg. G-CSF was discontinued after an adequate number of stem cells had been collected, but the fever persisted. Oseltamivir at 150 mg twice daily was then prescribed for the donor because the respiratory tract virus panel examination revealed influenza A infection. The fever became controlled 24 h after oseltamivir administration. The plerixafor procedure was considered to have permitted "sufficient mobilization" in a healthy donor who could not be mobilized with G-CSF probably because of his influenza infection.

Many factors including age, sex, body mass index, baseline leukocyte count, and comorbid conditions may compromise mobilization [3]. Although certain viral infections may cause poor mobilization, data on the influence of influenza in this context are rather limited [4]. Cytokine production or cytokine storm developing during influenza infection may be presumed to impair stem cell mobilization [5]. A combination of G-CSF and

plerixafor can be used to treat mobilization failure and is usually well tolerated [6,7]. The only option upon stem cell mobilization failure with G-CSF is bone marrow harvesting. Our donor was given plerixafor "just in time"; he had an active infection and did not consent to bone marrow harvesting. While plerixafor is usually used for mobilization in lymphoma or myeloma patients, literature data are available about its use in allogeneic settings [8]. Stem cells in numbers adequate for safe transplantation were collected in a single procedure.

This report indicates that influenza A may suppress the hematopoietic system, negatively affecting stem cell mobilization. The problem may be overcome by plerixafor administration.

Keywords: Plerixafor, Influenza A, Healthy donor

Anahtar Sözcükler: Plerixafor, İnfluenza A, Sağlıklı verici

Conflict of Interest: The authors of this paper have no conflicts of interest, including specific financial interests, relationships, and/or affiliations relevant to the subject matter or materials included.

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Influenza A Infection and Stem Cell Mobilization

İnfluenza A Enfeksiyonu ve Kök Hücre Mobilizasyonu

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To the Editor,

We read the publication entitled "Use of Plerixafor to Mobilize a Healthy Donor Infected with Influenza A" and found it to be very interesting [1]. Yeral et al. [1] mentioned that "The effects of influenza A infection on stem cell mobilization are not known" and concluded that "This report indicates that influenza A may suppress the hematopoietic system, negatively affecting stem cell mobilization. The problem may be overcome by plerixafor administration" [1]. This article may provide a new observation and confirm the usefulness of plerixafor in achieving stem cell mobilization. Nevertheless, it should be noted that this is not the first case of stem cell transplantation in which the donor has influenza A infection. Lee et al. [2] reported stem cell transplantation from a related donor infected with influenza H1N1 2009 and in that case the transplantation was completely done without noting any problem of stem cell mobilization due to the influenza virus. Regardless of using plerixafor, however, stem cell transplantation in cases in which the donor has influenza infection is a considerable challenge and it is questionable whether the procedure should be done then or not.