**COVER LETTER**

**Dear Editor-in-Chief**

We would like to submit our manuscript for consideration as ‘Regular article’ in ‘Blood’.

**Title:** Outcome of reinforced stem cell infusion after nonmyeloablative HLA-matched related stem cell transplantation for adult patients with sickle cell disease and β-thalassemia

**Importance:** Nonmyeloablative stem cell transplantation (NST) developed by the National Health Institute (NIH), USA, produced successful outcomes for patients with sickle cell disease. Yet, this type of transplantation was applied only to patients with sickle cell disease. Because thalassemia share biological features different from those of SCD, NMA condition regimens have been rarely applied to patients with thalassemia major (TM) and no successful outcome with NST for TM has been reported to date. We transplanted 13 patients with β-TM or SCD by following the NIH protocol. The NST was equally effective in eradicating abnormal hemoglobin phenotype of β-TM as in SCD. Another limitation of the NIH protocol was prolonged immunosuppression after 1 year of transplantation. We established two-stage strategy for this limitation; initially achieving mixed donor chimerism using the NIH protocol and, then, facilitating donor chimerism by using the reinforced hematopoietic stem cell (SC) infusion in cases of need for prolonged immunosuppression. A considerable portion of the patients who received this reinforced infusion could achieve complete donor chimerism without having GVHD and immunosuppression was successfully withdrawn. However, one fatal case was reported after the infusion. The overall survival and event-free survival at 4 years in all patients was 91.7% respectively. The thalassemia-free survival rate in β-TM patients was 87.5% (95% CI, 38.7–98.1) at 4 years. We believe that this is the first report that NMA SCT could be successfully applied for adult patients with TM.

We certify that our paper is an original research, has not been previously published and has not been submitted for publication elsewhere while under consideration.

We would like to submit our data as a ‘Regular article’ in ‘Blood’.

I look forward to getting good comments from you.

Sincerely yours,

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