

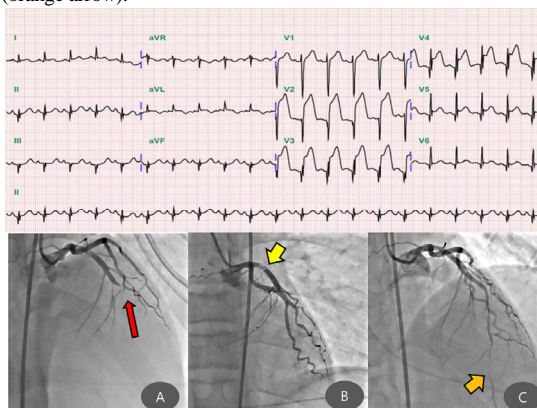
# ST elevation MI in a 17 year old man with acute lymphoblastic leukemia who received allo-SCT

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An acute coronary syndrome including myocardial infarction is usually developed in connection with atherosclerosis in elderly patient. However, arterial occlusive disease could occur rarely in the patients who received allogeneic stem cell transplantation (allo-SCT), associated with graft versus-host disease (GVHD), immunotherapy or administration of steroid in spite of young age. We report a case of ST elevation myocardial infarction in a 17-year-old man with precursor B cell acute lymphoblastic leukemia who received unrelated allo-SCT after myeloablating conditioning 4 years before. The patient was recovered well after an emergent percutaneous coronary intervention. This case is meaningful because it provides clinicians with the caution that coronary vascular disease (CVD) can occur even to an young patient after allo SCT, regardless of conventional risk factors for CVD. In addition, certain adolescent patients who received allo-SCT may require an active treatment to prevent CVD.

Figure 1. The electrocardiogram (ECG) at emergent department. The ST-segment elevation was shown in leads V2 to V6 leads of ECG Figure 2. Coronary angiography. (A) and (B) before percutaneous coronary intervention (PCI): 90% stenosis (red arrow) of proximal left anterior descending coronary artery (LAD) with thrombus (yellow arrow) (C) after PCI: Resolved state of initial thrombotic occlusion in proximal LAD, similar 40% of stenosis with previous CAG in distal LAD (orange arrow).



# Darbepoetin may be an effective treatment for anemia after allogeneic HSCT in myeloid malignancies

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**Background:** Anemia is a very common clinical condition after allogeneic hematopoietic stem cell transplantation (HSCT), and it may be associated with delays in erythroid recovery. Darbepoetin alpha can be considered as an alternative method to transfusion for the treatment of anemia after allogeneic HSCT. But, there is no established treatment guideline. **Methods:** We retrospectively reviewed patients diagnosed as acute myeloid leukemia (AML) or myelodysplastic syndrome (MDS) who had anemia after allogeneic HSCT and they were treated with darbepoetin alpha between 2014 and 2016. Their characteristics including underlying hematologic disease, conditioning regimen, donor type, HLA and ABO/Rh matching, concomitant immunosuppressant use and engraftment status were reviewed. The clinical response was assessed with transfusion requirements and hemoglobin levels during and after treatment of darbepoetin alpha. **Results:** Of the 144 adult patients who received allogeneic HSCT, 10 patients with myeloid malignancies were treated with darbepoetin alpha. Among them, 5 patients were diagnosed as MDS, 5 patients as AML. In the clinical response assessment, 7 of 10 patients showed elevated Hgb level ( $\geq 2\text{g/dl}$ ) compared with baseline Hgb levels, and 3 patients observed no response. In the responder group, the Hgb level was maintained without PRC transfusion within three months of treatment at the latest. The median EPO level in the responder group was 49.15(7.56-383.52mIU/ml), which was lower than 84.12(66.93-94.66mIU/ml) in the no responder group but, there was no statistical significance( $p = 0.860$ ). The three patients of no responder group were expired due to progression of baseline hematologic diseases. **Conclusions:** This study showed that darbepoetin alpha is effective treatment for reducing PRC transfusion requirements and may be enhancing erythroid recovery in patients with myeloid malignancies who underwent allogeneic HSCT.