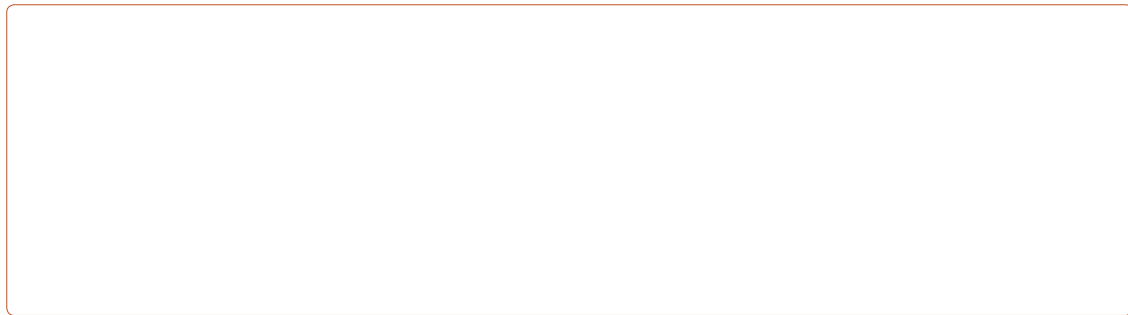


Life-threatening Capillary Leak Syndrome in an Adult with Refractory Acute Myeloid Leukemia during Allogeneic Transplantation: a Case Report and Review of Literature

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Introduction

CLS is one of the life-threatening early complications which usually occur during hematopoietic stem cell infusion or hematopoietic reconstruction process in addition to graft-versus-host-disease (GVHD) and infection [1]. It is characterized by unexplained episodic capillary hyperpermeability, which causes the shift of fluid and protein from the intravascular space to the interstitial space [2]. However, since the nonspecific signs and symptoms of CLS and the overlapping manifestations of early complications after transplantation, CLS tends to be easily confused with other early complications for clinicians. In this case, we report an adult with refractory acute myeloid leukemia who developed fatal CLS during allo-HSCT with review of the literature.

Case Report

A 27-year-old male was first admitted to our hospital in August 2014 with complaints of chills and fever. He exhibited obvious pain and swelling of gastrocnemius and activity abstinence. Peripheral blood counts revealed white cell counts of $29.9 \times 10^9/L$, hemoglobin level of 89g/L, platelet counts of $179 \times 10^9/L$. Bone marrow was hypercellular exhibiting infiltration with 30% blast cells comprising myeloblasts and promonocytes. Immunophenotype analysis showed 54% abnormal cells which were positive for CD13, HLA-DR, CD11b, CD11c, CD33, CD14, CD64 and CD15, and weakly positive for CD34 and MPO. The overall findings were consistent with acute myeloid leukemia. G-banding revealed 46, XY. Moreover, genetic testing revealed positive for dupMLL fusion. He did not respond to "HA" (HHT 4 mg/d \times 7d, Ara-c 0.2 g/d \times 7d) and subsequent "IA" (IDA 30 mg d1, 20 mg d2-3, Ara-c 0.2 g/d \times 7d) induction chemotherapy.

Salvage therapy consisted of DAC (decitabine) (20 mg/m²/d \times 5d), Ara-c (cytarabine) (10 mg/m²/d \times 2d) and Ara-c (10 mg/m² every 12 h \times 3d) was planned. Because no full HLA-matched donor was readily available, a combination of a haploidentical stem cell graft and an unrelated umbilical cord blood unit was scheduled. The BU/CY-based conditioning regimen consisted of Me-CCNU 250 mg/m² (day -10), Ara-c 4 g/m²

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perfusion of major organs. CVP was closely monitored. Clinically, the patient progressively improved. However, he redeveloped severe edema and anuria on day 30. BNP, liver enzymes and serum bilirubin level continued to increase. Neutrophil engraftment was achieved on

