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A Rare Etiology of Hepatomegaly: Extramedullary Hematopoiesis After Allogeneic Stem Cell Transplantation

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INTRODUCTION

Hepatomegaly is a challenging clinical finding with increased morbidity after allogeneic hematopoietic stem cell transplantation (allo-HSCT). Extramedullary hematopoiesis is highly associated with bone marrow failure.

AIM

We aimed to present a case report about hepatomegaly associated poor graft after allo-HSCT.

CASE REPORT

Twenty-one-year-old male patient was admitted to Ege University HSCT unit with B cell acute lymphoblastic leukemia in first remission. He received an allo-HSCT with mismatched unrelated donor. His conditioning regimen included total body irradiation (TBI) + cyclophosphamide (Cy) + anti-thymocyte globulin (ATG). On day 10, cytomegalovirus (CMV) DNA was detected >5000 IU/ml. Ganciclovir treatment was added by infectious disease specialist. Engraftments of three lines were completed on day 15. First month bone marrow (BM) biopsy control was normocellular and his chimerism was 100%; CMV DNA was undetectable. He was discharged with valganciclovir maintenance for 2 weeks.

RESULTS

On day 35, he was internalized with ascites, pancytopenia. He complained of no weight change, but loss of appetite. Liver/renal functions, bilirubin, C-reactive protein levels were normal. The BM aspiration and biopsy performed as his pancytopenia were worsened. Biopsy reported no increase of blasts but hypocellular bone marrow without any fibrotic changes. Cytogenetic analysis of BM showed no clinically significant mutations. The ascites sample was also analyzed. Serum-ascites albumin gradient was 1.1; cytological analysis reported neither infection nor malignancy. Abdomen ultrasound reported hepatomegaly (18 cm) and ascites. Liver biopsy reported extramedullary hematopoiesis. There were neither inflammatory changes nor graft versus host disease. Filgrastim 5 mcg/kg/day, eltrombopag 50-300 mg/day titrated by daily complete blood count analysis, were given as supporting treatment. Valganciclovir was discontinued as CMV DNA clearance was detected. On day 90, his cytopenia tended to be improved and liver became non-palpable. He is still under follow-up with full donor chimerism and no cytopenia recurred for 21 months.

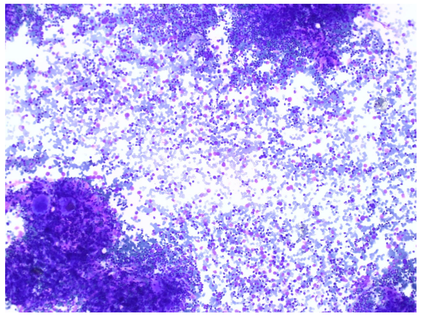


Image 1: Bone marrow aspiration at first diagnosis of ALL (10x)

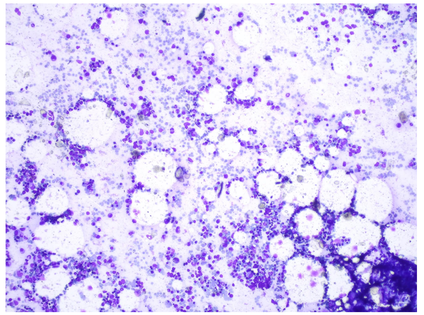


Image 2: Control BM aspirate on day 28 after allogeneic HSCT. (10x)

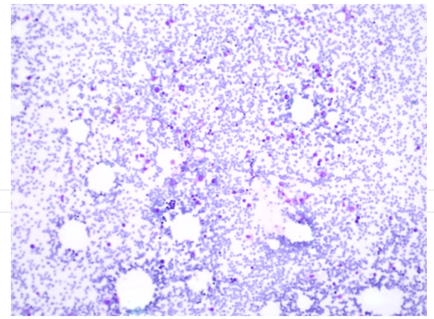


Image 3: poor graft on day 35 after allogeneic HSCT. Note that only few marrow with few myeloid cells on 10x.

CONCLUSIONS

After allo-HSCT, several etiologies of hepatomegaly such as infections, malignant tumor infiltrations, GVHD should be evaluated carefully. Liver biopsy should be performed in case of unexplained hepatomegaly.

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