Cellular Therapy and Transplantation (CTT), Vol. 3, No. 9
doi: 10.3205/ctt-2010-No9-abstract09

Abstract accepted for "4th Raisa Gorbacheva Memorial Meeting on Hematopoietic Stem Cell Transplantation", Saint Petersburg, Russia, September 18–20, 2010

Contribute a comment

Allogeneic hematopoietic stem cell transplantation with reduced-intensity conditioning in patients with myelodysplastic syndrome

Yulia V. Rudnitskaya, Elena V. Morozova, Yuriy R. Zalyalov, Vladimir A. Kostorov, Ludmila S. Zubarovskaya, Boris V. Afanasyev

R.M. Gorbacheva Memorial Institute of Children Hematology and Transplantation, Pavlov State Medical University, Saint-Petersburg, Russia

Correspondence: Yulia V. Rudnitskaya, R.M. Gorbacheva Memorial Institute of Children Hematology and Transplantation, Saint-Petersburg Pavlov State Medical University, 6/8, Tolstoy str., Saint-Petersburg, 197022, Russia, E-mail: rudnitskaya_@mail.ru

Abstract

Allogeneic hematopoietic stem cell transplantation (alloHSCT) is the only curative treatment for patients with myelodysplastic syndrome (MDS). Nevertheless, alloHSCT in MDS patients is associated with a high mortality rate around the transplant procedure (graft rejection or failure, graft-versus-host disease (GVHD), infectious complications). MDS is more common in persons over 40 years with a number of associated diseases. Therefore long-term survival after alloHSCT in MDS may also depend on the toxicity of the conditioning regimens. Myeloablative conditioning regimens (MCR) and the reduced intensity conditioning (RIC) are used for alloHSCT in MDS patients. MCR is frequently associated with the development of organ failure, severe mucositis, venoocclusive disease, and infertility. The RIC regimen is less toxic, but the use of RIC may increase the frequency of relapse after HSCT.

Objective: To evaluate the effectiveness of RIC alloHSCT from both related and unrelated donors in patients with high risk MDS in different age groups.

Materials and methods: AlloHSCT was performed in 12 patients (5 were transplanted from matched related donors, and 7 from matched unrelated donors). Four patients underwent a second allo-HSCT from the same donor after relapse or engraftment failure. The median patient age was 24 (7–53) years. According to the IPSS scoring system, 4 patients belonged to the high-risk group, 4 to the intermediate-1 group, and 4 to the intermediate-2 group. All patients received fludarabine-based RIC regimens. Prevention of acute GVHD was performed with tacrolimus or cyclosporine A and with methotrexate (short course). In the case of unrelated alloHSCT, horse antithymocyte globulin at a dose of 60–80 mg/kg was also used for GVHD prophylaxis.

Results: Four-year overall survival (OS) was 63%, and 4-year event-free survival (EFS) was 40%. Four-year transplant related mortality (TRM) after unrelated allo HSCT did not exceed 20% and was comparable with TRM after alloHSCT from related donors (25%). In 12% of patients, the development of severe acute GVHD (III–IV degree) was noted. Causes of death were the following: acute GVHD (25%), primary graft failure (25%), progression of disease (25%), and infectious complications (25%).

Conclusions: Preliminary results showed the effectiveness of regimes with reduced intensity in patients with MDS at high risk in different age groups. Four-year TRM in alloHSCT from an unrelated donor was comparable with the TRM rate in allo HSCT from a related donor. Prevention and well-timed treatment of post transplant complications may increase overall survival and improve quality of life.

Keywords: myelodysplastic syndrome, allogeneic HSCT, reduced-intensity conditioning regimens

<-- Previous abstract Contents Next abstract -->

Contribute a comment

Top