An otherwise healthy 52-year-old woman presented to her primary physician with complaints of fatigue and easy bruising. Laboratory studies revealed anemia and thrombocytopenia. Vitamin B12, folate and copper levels were normal. A bone marrow exam revealed hypercellular marrow with trilineage dysplasia and approximately 10% myeloblasts, consistent with a diagnosis of refractory anemia with excess blasts (RAEB-2), a myelodysplastic syndrome (MDS). The patient was started on therapy with 5-azacytidine and referred to the Winship Cancer Institute of Emory University to be considered for allogeneic stem cell transplantation (ASCT).

The myelodysplastic syndromes are a group of disorders characterized by damage to the bone marrow that results in abnormal production of blood cells, as well as a variable risk of evolution to leukemia. Patients can present with anemia, leukopenia and thrombocytopenia. The disorders are usually progressive and eventually become life-threatening. The average survival of a patient with untreated RAEB-2 is about a year. Medications as well as blood transfusions can be used to treat MDS. However, ASCT from a suitable donor is the only therapy that offers the possibility of producing a long-term cure.

Emory Bone Marrow & Stem Cell Transplant Center

As part of the Winship Cancer Institute of Emory University, Georgia’s first and only cancer center designated by the National Cancer Institute (NCI), the Emory Bone Marrow & Stem Cell Transplant Center is committed to providing the latest, most innovative techniques and treatments, as well as top-notch supportive services and compassionate patient care. Our mission is to provide curative therapy using combinations of high-dose chemotherapy and bone marrow or blood stem cell transplants.
Winship: On the Forefront of Cancer Research

As a National Cancer Institute (NCI)-designated cancer center, the Winship Cancer Institute of Emory University is part of a select group of 67 centers nationwide that are on the forefront of the battle against cancer. Our participation in national, international and institutional clinical trials ensures that our patients have access to the latest advances in stem cell biology, immunology and cancer medicine.

For information about clinical trials available through the Emory Bone Marrow & Stem Cell Transplant Center, please call 404-778-3708.

MDS Treatment and Research continued

Medical evaluation at Winship’s Bone Marrow & Stem Cell Transplant Center demonstrated that the patient was an excellent candidate for transplantation, and human leukocyte antigen (HLA) typing was initiated. She did not have a suitably matched family member, but a fully matched unrelated donor was identified through the National Marrow Donor Program.

At this point, the patient opted to participate in a multicenter trial sponsored by the Bone and Marrow Transplant Clinical Trials Network (BMT CTN) comparing bone marrow and peripheral blood as the stem cell source for unrelated-donor transplantation. She was randomized to the blood stem cell arm and, following a conditioning regimen of fludarabine and melphalan, received a matched, unrelated-donor stem cell transplant.

In the first year following the maneuver, the patient experienced mild, chronic graft-versus-host disease (GVHD) involving the skin and liver, which responded to steroid therapy. Now at seven years post-transplant, she is in continuous remission, with full donor engraftment, and is off all immunosuppressive drugs.

The study in which she participated, published in a recent issue of The New England Journal of Medicine, found no significant difference between the two arms in overall survival rates at two years, and no difference in relapse rates or the incidence of acute GVHD. However, the study did demonstrate a significantly higher rate of chronic GVHD with the use of blood stem cells. Because GVHD can be a difficult and sometimes life-threatening complication, this finding has generated serious discussion among leaders in the transplant field and will likely result in a shift toward the preferential use of marrow as the source of stem cells for transplantation from unrelated donors. Edmund K. Waller, MD, PhD, director of the Emory Bone Marrow & Stem Cell Transplant Center at Winship, was a key author of and researcher for the study.

If you have a patient you believe would benefit from the treatments and services available at the Emory Bone Marrow & Stem Cell Transplant Center, please call 1-800-889-9616.

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