



Malakoplakia After Allogeneic Hematopoietic Stem Cell Transplantation

Tracy Robinson, RN, MN, CON(C), and Erin Streu, RN, MN, CON(C)

A 32-year-old woman named A.C. was diagnosed five years ago with stage IIIB nodular sclerosing Hodgkin lymphoma (HL). Following initial chemotherapy, she had refractory disease as evidenced by hypermetabolic activity on positron-emission tomography (PET) scan. A.C. was treated with a short course of salvage chemotherapy, stem cell collection, and autologous HSCT about 11 months after initial diagnosis. Her post-transplantation course was complicated by pneumonia and interstitial lung disease secondary to chemotherapy that rapidly improved with high-dose steroids.

Three months later, A.C. was feeling well, tapered off prednisone (Delta-sone®), and was free of symptoms. A repeat PET scan showed persistent hypermetabolic activity treated with a radical course of radiotherapy with complete resolution; however, another small area of concern emerged in the supraclavicular area. The decision was made to observe and repeat imaging in a few months but, before this could occur, A.C. had recurrence with supraclavicular lymphadenopathy. She was now six weeks pregnant and opted to continue her pregnancy, a goal she had prior to embarking on autologous HSCT. She gave birth to a healthy baby girl, began salvage chemotherapy, and was referred back to the transplantation program for consideration of allogeneic transplantation. She was initially not interested in pursuing another transplantation, but as a new mother she did not want to risk not being able to fulfill this role.

On completion of treatment, PET imaging again showed disease progression. At this point, 37 months from initial diagnosis and 2 years after autologous HSCT, A.C. agreed to an allogeneic mis-

matched unrelated donor HSCT in an attempt to cure her HL. She would be at risk for disease relapse, lung toxicity (secondary to her prior pneumonitis), graft-versus-host disease (GVHD), and infectious complications. She was counselled on the risks and benefits of transplantation and given a 20%–40% chance for long-term, disease-free survival. Lack of complete remission at the time of transplantation, prior autologous transplantation (less than 100 days), and a human leukocyte antigen (HLA)-mismatched unrelated donor transplantation would increase her risk of GVHD and infections in the immediate post-transplantation period.

The immediate post-transplantation course was complicated by acute GVHD of the skin (grade 2) and upper and lower gastrointestinal (GI) tract (grade 2), which required significant immunosuppressive therapy to control. A.C. was discharged from hospital (day 35) for close outpatient monitoring of her GVHD and potential for infectious complications. On day 82, A.C. presented to the outpatient clinic with a 10-day history of diarrhea, nausea, vomiting, dehydration, and weakness. She was readmitted for investigation and management of these new and debilitating symptoms. She was diagnosed with *Escherichia coli* (*E. coli*) gram-negative bacteremia in the blood and urine. A colonoscopy was conducted to assess her watery and bloody diarrhea and A.C. was diagnosed of malakoplakia of her GI tract. She was treated with IV antibiotics and attempts to change to oral antibiotics resulted in relapse of infection. A month after combination IV therapy, her blood cultures cleared but she continued with IV therapy for an additional two months to prevent recurrence. A follow-up computed to-

mography (CT) scan of the abdomen showed progressive bowel thickening necessitating the addition of daily er-tapenem (Invanz®) therapy (see Table 1).

A.C. spent more than 200 days in the hospital following her transplantation because of infectious complications and supportive care. Her home was four hours from the hospital, and her husband relocated to be closer while her parents took on a large role in parenting her daughter. A.C. experienced numerous complications and suffered many losses, including her role as a mother and her independence. She experienced frequent urinary incontinence as well as explosive, bloody, fecal incontinence and required narcotics to ease severe abdominal and lower back pain; she remained largely bedridden. Efforts to ambulate often precipitated incontinence and exacerbated her pain; she became withdrawn from medical and nursing staff and seemed distant from family. A.C. was malnourished and deconditioned. She experienced steroid myopathy, weakness, dehydration, malabsorption and, therefore, malnutrition. She refused physiotherapy and rehabilitation services. Nurses were frustrated with their inability to provide care and connect with A.C. and to facilitate improvement in her well-being. Despite visitors, A.C. was isolated and remained withdrawn and passive in her care.

Background

HL accounts for about 0.5% of all new cancer cases and 0.2% of all cancer deaths (National Cancer Institute,

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