

Partners in Oncology Care: Coordinated Follicular Lymphoma Management

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Four case examples illustrate the important role of multidisciplinary medical care for the optimal long-term care of patients with follicular lymphoma.

Patients benefit from multidisciplinary care that coordinates management of complex medical problems. Traditionally, multidisciplinary cancer care involves oncology specialty providers in fields that include medical oncology, radiation oncology, and surgical oncology. Multidisciplinary cancer care intends to improve patient outcomes by bringing together different health care providers (HCPs) who are involved in the treatment of patients with cancer. Because new therapies are more effective and allow patients with cancer to live longer, adverse effects (AEs) are more likely to impact patients' well-being, both while receiving treatment and long after it has completed. Thus, this population may benefit from an expanded approach to multidisciplinary care that includes input from specialty and primary care providers (PCPs), clinical pharmacy specialists (CPS), physical and occupational therapists, and patient navigators and educators.

We present 4 hypothetical cases, based on actual patients, that illustrate opportunities where multidisciplinary care coordination may improve patient experiences. These cases draw on current quality initiatives from the National Cancer Institute Community Cancer Centers Program, which has focused on improving the quality of multidisciplinary cancer care at selected community centers, and the Veterans Health Administration (VHA) patient-aligned care team (PACT) model, which brings together different health professionals to optimize primary care coordination.^{1,2} In addition, the National Committee for Quality Assurance has introduced an educational initiative to facilitate implementation of an oncologic medical home.³ This initiative stresses increased multidisciplinary communication, patient-centered care delivery, and reduced fragmentation of care for this population. Despite these guidelines and experiences from other medical specialties, models for integrated cancer care

have not been implemented in a prospective fashion within the VHA.

In this article, we focus on opportunities to take collaborative care approaches for the treatment of patients with follicular lymphoma (FL): a common, incurable, and often indolent B-cell non-Hodgkin lymphoma.⁴ FL was selected because these patients may be treated numerous times and long-term sequelae can accumulate throughout their cancer continuum (a series of health events encompassing cancer screening, diagnosis, treatment, survivorship, relapse, and death).⁵ HCPs in distinct roles can assist patients with cancer in optimizing their health outcomes and overall wellbeing.⁶

CASE EXAMPLE 1

A 70-year-old male was diagnosed with stage IV FL. Because of his advanced disease, he began therapy with R-CHOP (rituximab, cyclophosphamide, doxorubicin, vincristine, prednisone). Prednisone was administered at 100 mg daily on the first 5 days of each 21-day cycle. On day 4 of the first treatment cycle, the patient notified his oncologist that he had been very thirsty and his random blood sugar values on 2 different days were 283 mg/dL and 312 mg/dL. A laboratory review revealed his hemoglobin A_{1c} (HbA_{1c}) 7 months prior was 5.6%.

Discussion

The high-dose prednisone component of this and other lymphoma therapy regimens can worsen diabetes mellitus (DM) control and/or worsen prediabetes. Patient characteristics that increase the risk of developing glucocorticoid-induced DM after CHOP chemotherapy include age \geq 60 years, HbA_{1c} $>$ 6.1%, and body mass index $>$ 30.⁷ This patient did not have DM prior to the FL therapy initiation, but afterwards he met diagnostic criteria for DM. For completeness, other causes for elevated blood glucose should be ruled out (ie, infection,

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laboratory error, etc.). An oncologist often will triage acute hyperglycemia, treating immediately with IV fluids and/or insulin. Thereafter, ongoing chronic disease management for DM may be best managed by PCPs, certified DM educators, and registered dietitians.

Several programs involving multidisciplinary DM care, comprised of physicians, advanced practice providers, nurses, certified DM educators, and/or pharmacists have been shown to improve HbA_{1c}, cardiovascular outcomes, and all-cause mortality, while reducing health care costs.⁸ In addition, patient navigators can assist patients with coordinating visits to disease-state specialists and identifying further educational needs. For example, in 1 program, nonclinical peer navigators were shown to improve the number of appointments attended and reduce HbA_{1c} in a population of patients with DM who were primarily minority, urban, and of low socioeconomic status.⁹ Thus, integrating DM care shows potential to improve outcomes for patients with lymphoma who develop glucocorticoid-induced DM.

CASE EXAMPLE 2

A 75-year-old male was diagnosed with FL. He was treated initially with bendamustine and rituximab. He required reinitiation of therapy 20 months later when he developed lymphadenopathy, fatigue, and night sweats and began treatment with oral idelalisib, a second-line therapy. Later, the patient presented to his PCP for a routine visit, and on medication reconciliation review, the patient reported regular use of trimethoprim-sulfamethoxazole.

Discussion

Upon consultation with the CPS and the patient's oncologist, the PCP confirmed trimethoprim-sulfamethoxazole should be continued during therapy and for about 6 months following completion of therapy. Trimethoprim-sulfamethoxazole is used for prophylaxis against *Pneumocystis jirovecii* (formerly *Pneumocystis carinii*). While use of prophylactic therapy is not necessary for all patients with FL, idelalisib impairs the function of circulating lymphoid B-cells and thus has been associated with an increased risk of serious infection.¹⁰ A CPS can provide insight that maximizes medication adherence and efficacy while minimizing food-drug, drug-drug interactions, and AEs. CPS have been shown to: improve ad-

herence to oral therapies, increase prospective monitoring required for safe therapy dose selection, and document assessment of chemotherapy-related AEs.^{11,12} Thus, multidisciplinary, integrated care is an important component of providing quality oncology care.

CASE EXAMPLE 3

A 60-year-old female presented to her PCP with a 2-week history of shortness of breath and leg swelling. She was treated for FL 4 years previously with 6 cycles of R-CHOP. She reported no chest pain and did not have a prior history of hypertension, DM, or heart disease. On physical exam, she had elevated jugular venous pressure to jaw at 45°, bilateral pulmonary rales, and 2+ pitting pretibial edema. Laboratory tests that included complete blood count, basic chemistries, and thyroid stimulating hormone were unremarkable, though brain natriuretic peptide (BNP) was elevated at 425 pg/mL.

As this patient's laboratory results and physical examination suggested new-onset congestive heart failure, the PCP obtained an echocardiogram, which demonstrated an ejection fraction of 35% and global hypokinesis. Because the patient was symptomatic, she was admitted to the hospital to begin guideline-directed medical therapy (GDMT) including IV diuresis.

Discussion

Given the absence of significant risk factors and prior history of coronary artery disease, the most probable cause for this patient's cardiomyopathy is doxorubicin. Doxorubicin is an anthracycline chemotherapy that can cause nonischemic, dilated cardiomyopathy, particularly when cumulative doses > 400 mg/m² are administered, or when combined with chest radiation.¹³ This patient benefited from GDMT for reduced ejection-fraction heart failure (HFrEF). Studies have demonstrated positive outcomes when HFrEF patients are cared for by a multidisciplinary team who focus of volume management as well as uptitration of therapies to target doses.¹⁴

CASE EXAMPLE 4

An 80-year-old female was diagnosed with stage III FL but did not require immediate therapy. After developing discomfort due to enlarging lymphadenopathy, she initiated therapy with rituximab, cyclophosphamide, vincristine, and prednisone (R-CVP). She presented to her oncologist for

consideration of her fifth cycle of R-CVP and reported a burning sensation on the soles of her feet and numbness in her fingertips and toes. On examination, her pulses were intact and there were no signs of infection, reduced blood flow, or edema. The patient demonstrated decreased sensation on monofilament testing. She had no history of DM and a recent HbA_{1c} test was 4.9%. An evaluation for other causes of neuropathy, such as hypothyroidism and vitamin B₁₂ deficiency was negative. Thus, vincristine therapy was identified as the most likely etiology for her peripheral neuropathy. The oncologist decided to proceed with cycle 5 of chemotherapy but reduced the dose of vincristine by 50%.

Discussion

Vincristine is a microtubule inhibitor used in many chemotherapy regimens and may cause reversible or permanent neuropathy, including autonomic (constipation), sensory (stocking-glove distribution), or motor (foot-drop).¹⁵ A nerve conduction study may be indicated as part of the diagnostic evaluation. Treatment for painful sensory neuropathy may include pharmacologic therapy (such as gabapentin, pregabalin, capsaicin cream).¹⁶ Podiatrists can provide foot care and may provide shoes and inserts if appropriate. Physical therapists may assist with safety and mobility evaluations and can provide therapeutic exercises and assistive devices that improve function and quality of life.¹⁷

CONCLUSION

As cancer becomes more curable and more manageable, patients with cancer and survivors no longer rely exclusively on their oncologists for medical care. This is increasingly prevalent for patients with incurable but indolent cancers that may be present for years to decades, as acute and cumulative toxicities may complicate existing comorbidities. Thus, in this era of increasingly complex cancer therapies, multidisciplinary medical care that involves PCPs, specialists, and allied medical professionals, is essential for providing care that optimizes health and fully addresses patients' needs.

Author disclosures

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