A 61-YEAR-OLD WOMAN WITH NON-HODGKIN’S LYMPHOMA
Scott W. Possley, PA-C, MPAS

BACKGROUND

A 61-year-old woman with non-Hodgkin’s lymphoma (diffuse large B-cell lymphoma) presented to the emergency room (ER) complaining of light-headedness, fever, chills, nausea, vomiting, and diarrhea. She reported having chemotherapy several days ago and stated that she had not felt like this before. She started feeling unwell this morning after waking later than usual. She waited several hours before coming to the ER because she did not want to sit and wait to be seen. Her vital signs were taken and she was found to have a temperature of 101.8°F (38.8°C), a respiratory rate of 20 breaths/minute, a heart rate of 122 beats/minute, and blood pressure of 80/50 mm Hg. She reported no pain and indicated that her blood pressure sometimes changed after she underwent a cycle of chemotherapy. The medical team immediately sent stat labs, initiated intravenous (IV) access, and started fluids.

MEDICAL HISTORY

The patient’s large cell lymphoma was initially diagnosed in 1995 after she developed a mass in the left side of her neck. Lymph node biopsy was positive for large cell lymphoma, CD20+. Bone marrow biopsy was negative. She was treated with cyclophosphamide/doxorubicin/vincristine/prednisolone (CHOP) for 6 cycles with mantle radiation and achieved a complete response.

In June 2005, the patient developed abdominal pain and a left axillary mass. The left axillary mass was biopsied and was negative. She had a positron emission tomography scan that showed a retroperitoneal mass. The mass was biopsied and was positive for relapsed large cell lymphoma. She was treated with rituximab-CHOP (R-CHOP) for 4 of 6 cycles—most recently last week—and received pegfilgrastim the day after she completed her fourth cycle of R-CHOP 4 days previously.

The patient has no known drug allergies. She takes herbal supplements, but no prescription medication.

FAMILY HISTORY

Her father died of cancer at age 83. Her mother had a cardiovascular accident at age 68, but is alive and otherwise healthy. She has 2 sisters, aged 56 and 60 years, who are alive and healthy.

SOCIAL HISTORY

The patient has a career in finance. She is widowed and has no children. She has a 30-year smoking history but quit 3 months ago. She describes herself as a “social drinker” and denies any illegal drug use.

PHYSICAL EXAMINATION

On presenting to the ER, the patient appeared fatigued and weak. She was experiencing chills and, overall, looked ill. She was alert and oriented times 3 with normal affect and coordination. The patient had no chest pain and no palpitations. She was not eating because of nausea and vomiting and was experiencing musculoskeletal aches and pains. She was experiencing no dysuria or urgency. Her eyes appeared normal. External inspection of ears and nose was normal, and inspection of lips, teeth, and gums and oropharynx examination were all normal. Her general neck examination was normal and lymphatic examination of the neck showed no lymphadenopathy. Her respiratory assessment was normal. Her abdomen examination and bowel sounds were normal, and there were no masses or tenderness. Her integumentary system was normal. There was no clubbing or cyanosis and edema was absent.

TREATMENT COURSE

The patient’s systolic blood pressure was in the high 70s and low 80s despite fluid resuscitation. Her stat showed a white blood cell count of 0.7 K/µL, a hemoglobin of 8.8 g/dL, and a platelet count of 121 K/µL; the blood urea nitrogen was 44 mg/dL, and serum creatinine was 0.9 mg/dL with no other abnormal chemistries or liver function tests.

The patient was immediately started on double gram-negative broad-spectrum antibiotic coverage (piperacillin + tazobactam and tobramycin) and further IV access was initiated to continue fluid resuscitation. Because of her unstable blood pressure and other signs of sepsis, she was quickly transferred to the intensive care unit (ICU). In the ICU she continued on IV fluid antibiotics and pressors were started to maintain the blood pressure. She was subsequently intubated as a result of volume overload from fluid resuscitation.

She was tapered off pressors 24 hours later and extubated 48 hours later. Microcultures had no growth during her hospital stay. She was transferred to the oncology ward, finished her antibiotics, and 12 days later was sent home to await follow-up with her oncologist for her next R-CHOP cycle.

DISCUSSION

Neutropenic fever (NF) and sepsis are serious and can be suddenly life-threatening if not acted upon early in the course of symptoms. This patient should have presented to the ER sooner. Even though she was given growth factor support for her regimen (National Comprehensive Cancer Network [NCCN] guidelines report her being at increased risk because of her chemotherapy regimen [R-CHOP], female gender, diagnosis of lymphoma,
and prior chemotherapy), she still had a septic event. Aggressive fluid resuscitation and immediate empiric antibiotics helped save her life. Patients need to realize that even with growth factor support, life-threatening complications can and do occur—and waiting and hoping for symptoms to dissipate is not the appropriate response.

The NCCN guidelines can be utilized by healthcare providers to determine which patients need growth factor support. Factors stratifying which patients are at risk for neutropenia and NFs/sepsis include type of chemotherapy regimen used, type of cancer, prior treatment history, age, gender, Karnofsky performance status, and other comorbid conditions, such as chronic obstructive pulmonary disease and coronary artery disease. Patients also need to be aware of the risks of NFs and sepsis despite proper interventions and respond proactively to improve their outcomes. Working together as a team, healthcare providers—utilizing approved guidelines, in addition to patient education and empowerment—can keep patients alive, healthy, and on track to receiving their projected chemotherapy course.

REFERENCE