CASE STUDY

54-YEAR-OLD FEMALE WITH ADENOCARCINOMA OF THE DESCENDING COLON AND LIVER METASTASES

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BACKGROUND

A 54-year-old Caucasian female presented with a 2-month history of rectal bleeding. Eastern Cooperative Oncology Group performance status was 0. On colonoscopy she was found to have an obstructing, ulcerated adenocarcinoma of the descending colon. Magnetic resonance imaging (MRI) showed multiple liver metastases, and laboratory tests revealed a carcinoembryonic antigen (CEA) level of 650 ng/mL and hemoglobin (Hgb) of 12.5 g/dL. She underwent colectomy with a reduction in her CEA to 150 ng/mL and was referred to medical oncology for chemotherapy.

TREATMENT PLAN

The patient was started on modified 5-fluorouracil (5-FU)/oxaliplatin (FOLFOX) chemotherapy with bevacizumab.

TREATMENT COURSE

Her first 2 cycles of chemotherapy were well tolerated except for delayed nausea following cycle 2. On returning for cycle 3, treatment was delayed because of an absolute neutrophil count (ANC) of 600/mm³. The patient began pegfilgrastim to prevent further chemotherapy-induced neutropenia, and the oncology nurse practitioner (NP) reviewed protective precautions with her, including the importance of monitoring her temperature and calling the clinic if she became febrile or developed chills. Her Hgb was 10.5 g/dL, and she was started on darbepoetin alfa subcutaneously every 2 weeks to coincide with her chemotherapy cycles. Her ANC recovered, and she returned for her third cycle of chemotherapy at which time she complained of nausea. The oncology NP determined that she was suffering from anticipatory nausea, and lorazepam and palonosetron were prescribed for antiemesis. The patient had no further nausea and completed cycle 3. MRI showed regression of her liver metastases. She completed a total of 6 cycles, then took a treatment holiday. Once her Hgb returned to 12.5 g/dL, darbepoetin alfa was discontinued.

For the next 4 months, the patient did well; however, at her next clinic visit, she reported feeling fatigued, a loss of appetite, and a 15-lb weight loss. Her CEA increased to 550 ng/mL, and MRI showed progression of her liver metastases. She chose to continue aggressive chemotherapy and selected irinotecan in combination with infusional 5-FU/leucovorin (FOLFIRI) to which cetuximab was later added. She received intermittent chemotherapy every other week for 2 months, followed by 2 months off, 2 months on, then 2 months off, which was continued for 6 months. She regained her baseline weight and was able to resume normal activities. An MRI taken at her next clinic visit showed disease progression. She elected to receive capcitabine as a single agent, 1000 mg/m² by mouth twice daily on days 1 through 14 and repeated every 21 days. After the fourth cycle, she developed grade 2 palmar-plantar erythema, and capcitabine was temporarily stopped. Once her erythema improved, capcitabine was resumed at a lower dose. The patient responded well for an additional 6 cycles (4.5 months), at which time she developed fatigue and weight loss. MRI confirmed disease progression, and she decided to stop further therapy. She requested hospice home care at her daughter’s house. After 5 months, the patient ultimately developed ascites and severe pain and died with her daughter at her side.

DISCUSSION

The combination of targeted therapeutic agents with standard chemotherapy is associated with improved patient outcomes and has increased the available treatment options for patients with advanced colorectal cancer. FOLFOX plus bevacizumab in the first-line setting has resulted in a 53% response rate and an overall survival rate of 26 months. Although this patient received cetuximab as second-line therapy per its US Food and Drug Administration indication, the drug is being studied in the first-line setting and has demonstrated increased response rates; however, it is too early to determine whether these results will translate into increased survival rates.

Data from treatment holiday or maintenance therapy studies have indicated benefit from chemotherapy-free intervals over continuous treatment with respect to patient quality of life (QOL) without compromising progression-free survival rates. In one study, patients received continuous (every 2 weeks) or intermittent (2 weeks on, followed by 2 weeks off, etc. for 2 months) FOLFIRI. Progression-free survival (7.3 months and 8.8 months, respectively) and overall survival (17.6 months and 16.9 months, respectively) were similar between groups, with less patient discomfort reported in the intermittent group. The discontinuity in this patient’s treatment schedule may have positively affected her initial ability to resume normal daily activities.

The oncology NP and healthcare team in this case had considerable knowledge of chemotherapy-induced side effects and the proper supportive care measures necessary to improve the patient’s QOL and ensure compliance with treatment. The patient was assessed and treated for anemia and neutropenia, and protective precautions were reviewed with her to avoid febrile/neutropenic complications and treatment delays. Likewise, when the patient complained of nausea, the oncology NP was able to identify anticipatory emesis; lorazepam was ordered for anticipatory nausea and palonosetron was initiated to reduce acute nausea and vomiting, which should lead to decreased anticipatory nausea and vomiting with subsequent cycles. Although the patient did not survive her disease, she suffered less discomfort and fewer complications because of these supportive interventions.

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REFERENCES


