Improving Quality of Life Through Pain Control

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Pancreatic cancer is the fourth leading cause of death in the United States and was responsible for an estimated 43,920 new cases of cancer and 37,390 deaths in 2012 (American Cancer Society [ACS], 2012). Because of the difficulty palpating and viewing the pancreas, a late or advanced presentation is seen in 80% of cases (ACS, 2012); however, even an early presentation is associated with high mortality. Surgical resection of late-stage carcinoma of the pancreas often is not recommended (National Cancer Institute [NCI], 2012). Those factors contribute to the high mortality rate and short life expectancy associated with pancreatic cancer, which has an overall five-year survival rate of 5% (ACS, 2012).

According to the NCI’s (2012) PDQ®, patients with pancreatic cancer often are suitable for clinical trials because of their poor response to other treatment options. Patients with pancreatic cancer also have successful palliation of symptoms with standard treatment (NCI, 2012).

Case Study

B.B., a 45-year-old Caucasian man, presented to his physician with abdominal pain and bloating that had been increasing in severity for three months. He lost 15 pounds and had become increasingly depressed. He noticed his eyes had turned yellow and his urine was a dark color. B.B. was a former alcoholic who had been sober for 12 years, but had no other pertinent medical history. B.B. was employed as a systems analyst for a large corporation and responsible for a team of 15 employees. He also was married with two children, aged 9 and 11 years.

After a prolonged hospitalization, B.B. was diagnosed with a stage IV adenocarcinoma of the pancreas with extensive liver metastases and encasement of surrounding blood vessels. B.B. presented with elevated carbohydrate antigen (CA) 19-9 at diagnosis.

Although resection surgery was not an option for B.B., he underwent a stent placement for a blocked bile duct. Because of the positioning of the pancreas in the abdomen and its proximity to the liver, blockage of bile ducts often occur and result in hepatic symptoms such as jaundice, dark urine, and lethargy. The stent opens up the narrowed area of the bile duct and allows for free flow of bile to aid in digestion and palliating symptoms.

After a successful stenting and improvement in his performance status, B.B. was evaluated for chemotherapy and received a multiple drug regimen that consisted of fluorouracil, leucovorin (folinic acid), irinotecan, and oxaliplatin (FOLFIRINOX). After treatment, B.B.’s tumor markers, carcinoembryonic antigen and CA 19-9, briefly declined; however, after three months, the disease progressed rapidly and he developed extensive clotting in his lower extremities and inferior vena cava. A second-line regimen consisting of gemcitabine and erlotinib was tried; however, it also did not result in benefits.

B.B. developed Trousseau syndrome, which is a manifestation of a hypercoagulable state often associated with a visceral malignancy (Varki, 2007). The hypercoagulability is best treated with supportive care and by eliminating the disease. Trousseau syndrome can be an ominous clinical indicator.

Throughout his treatment course, B.B. was in constant, severe pain. B.B. described his pain as diffused throughout his upper and lower abdomen. To quantify the pain, a numeric scale was used. B.B. rated his pain as 6 out of 10, with several excruciating episodes during the day that he rated as 10 out of 10. Those episodes lasted 1-2 hours and occurred as frequently as 4-6 times per day, particularly in mornings and evenings. With poor appetite, B.B.’s weight continued to decrease; he lost about 20% (40 lbs) of his previous body weight of 180 lbs.
Palliative Care

Palliative care assists oncology teams and patients as well as family units with options for care. In particular, palliative care is valuable for relieving symptom burden to enhance quality of life. The American Society of Clinical Oncology published two seminal articles that advocate earlier palliative-care integration into the standard of care for patients with advanced cancer and recognize the potential survival benefit that palliative care can offer independent of chemotherapy (Smith et al., 2011; Temel et al., 2010). One of those articles showed a significant increase in life expectancy among patients with lung cancer who received palliative care at diagnosis (Temel et al., 2010).

Performance Scales

To provide a common language to describe patients’ ability to participate in activities of daily living (ADLs), practitioners use performance scales. The Eastern Cooperative Oncology Group (ECOG) numeric scale ranges from 0 (fully active) to 5 (dead) and assesses how the patient’s disease is progressing and how the disease and treatment affect their ability to conduct ADLs (Oken et al., 1982). The ECOG scale also is used to determine appropriate treatment and prognosis. The Karnofsky Performance Scale (KPS) assesses patients’ functional ability to carry out ADLs and rates a person from 100 (able to carry on normal ADLs) to 0 (dead) (U.S. Department of Veterans Affairs, 2012). B.B.’s performance status was judged at ECOG 2/KPS 50, which assessed that he was able to participate in self-care activities and was awake and moving for about 50% of his waking hours.

Pain Management

B.B.’s cancer pain was diagnosed as a mixed-visceral nociceptive pain syndrome with a celiac plexopathy. That diagnosis was based on his pain pattern and tumor encroachment to the retroperitoneum. Nociceptive pain is caused by stimulation of peripheral nerve fibers and is classified as visceral and somatic (Ashley, D’Olimpio, McPherson, Panchal, & Passik, 2009). In addition, B.B. experienced significant breakthrough pain, transitory flares of pain that occur on top of a background of otherwise controlled persistent pain (Ashley et al., 2009). Although B.B. underwent celiac plexus block, it could not control his pain. Therefore, escalating doses of morphine up to 1,200 mg were required. Eventually, B.B. was rotated to rescue methadone in an attempt to spare him the lethargy caused by high doses of morphine.

Unmanaged pain has negative impacts on patients and family members and can affect sleep, well-being, and relationships (Ashley et al., 2009). During his first line of chemotherapy, B.B. had a palliative-care consultation, which resulted in significant improvement in his pain management. His stable pain management regimen consisted of 40 mg of methadone TID and 100 mg of morphine concentrate every four hours PRN. A short course of dexamethasone modestly improved his appetite and brought some relief of his depression.

After the second cycle of second-line chemotherapy, B.B. requested that no additional chemotherapy be given, and he went on a home hospice program. He died six weeks later, comfortable but requiring increasing doses of morphine. A continuous morphine infusion was required the last three days of his life.

Conclusion

B.B. had a complex presentation related to his disease and its complications. In addition, significant psychosocial issues needed to be vetted. His young children, along with his wife and parents, would benefit from counseling. As a family, they needed to deal with many issues related to B.B.’s treatment and palliative-care options. Goals-of-care discussions should include family members and caregivers, educating and involving them in palliative-care planning.

By focusing on ways to improve pain and symptom management, patients’ quality of life can be enhanced even if life extension is not possible. Incorporating palliative care early in the course of care for someone with advanced cancer is a quality component of cancer care. Oncology nurses have an important role in identifying and working with patients who need palliative care.

References