Diagnosis and Management of Opioid-Induced Bowel Dysfunction in Patients With Advanced Cancer

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Opioid-induced bowel dysfunction (OBD) is characterized by a constellation of symptoms, including constipation; dry, hard stools; straining; and incomplete evacuation. The use of a prophylactic bowel regimen that includes a stimulant laxative and stool softener generally is accepted and should be initiated at the start of opioid therapy. Effective prevention and treatment of OBD reduce the risk of associated physiologic complications and can improve pain management and quality of life for patients and their families.

Opioid-induced bowel dysfunction (OBD) is a clinical syndrome characterized by slowed gastrointestinal motility (Thomas, 2008) that occurs in up to 90% of patients with advanced cancer receiving opioids (Sykes, 1998). Its predominant symptom, constipation, is defined as less than three defecations per week (or change from usual pattern), or the subjective symptom of difficult, infrequent, or incomplete passage of stool (McMillan, 2004; Reville, Axelrod, & Maury, 2009). OBD includes a constellation of gastrointestinal symptoms (see Figure 1); as a result, distinguishing OBD from other conditions can be difficult. In addition to being challenging to treat, the syndrome poses the risk for serious medical complications and can negatively impact pain management and quality of life (Bell et al., 2009).

Case Study

At age 27, Ms. J was newly diagnosed with stage IV gastric adenocarcinoma, with a gastric antrum tumor and extensive involvement of her lung, thoracic, abdominal, and pelvic lymph nodes, thoracic and lumbar vertebrae, and pelvic bones. She began a chemotherapy regimen of docetaxel, cisplatin, and 5-fluorouracil; an antiemetic regimen of aprepitant, dexamethasone, ondansetron, and lorazepam; and IV zoledronic acid. Ms. J also began receiving oxycodone every four hours as needed for lower back pain. The toxicities of 5-fluorouracil and docetaxel include diarrhea; therefore, a prophylactic bowel regimen was deferred.

Ms. J returned to the clinic three weeks later for treatment, complaining of abdominal cramping, bloating, mild nausea, and anorexia, with decreased oral intake. She reported diarrhea for one week following chemotherapy; stools subsequently became small, hard, and difficult to pass. Prior to her cancer diagnosis, Ms. J moved her bowels once or twice daily. Although she was passing flatus, her last bowel movement was five days prior. Despite taking oxycodone at least five times daily, her persistent lower back pain had caused decreased physical activity. Ms. J feared that the new symptoms indicated her cancer was advancing.

Ms. J was afebrile, alert, and oriented. Her blood pressure was slightly decreased, with mild orthostatic changes. Oral mucosa and skin were slightly dry. Her abdomen was moderately distended, soft, and nontender, with hypoactive bowel sounds in all four quadrants. Bilateral lower extremity strength was 5 of 5, with normal deep tendon reflexes and sensation. Blood work revealed a white blood cell count of 1,700/mm^3 and absolute neutrophil count of 500/mm^3; therefore, digital rectal examination was deferred. Serum calcium was 9.5 mg/dl (within normal limits) when corrected for albumin. Creatinine and blood urea nitrogen were slightly elevated at 1.5 mg/dl and 20 mg/dl, respectively.

Diagnostic Evaluation

Although Ms. J's assessment findings are consistent with OBD, other differential

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