# Case Vignettes: Managing Various Presentations of Constipation in Patients With Cancer

*The following five cases represent scenarios that illustrate various approaches in addressing constipation in adults with cancer.*

## Case #1

*A 46-year-old woman with a stage II (T2 N1) breast cancer has received 4 cycles of doxorubicin plus cyclophosphamide adjuvant chemotherapy and sees you before receiving the first of a planned series of 4 cycles of paclitaxel (Taxol). You warn her that paclitaxel may cause extremity pain for a few days after drug administration. You then give her a prescription for oxycodone/acetaminophen (Percocet) that she can take every 4 hours as needed if she experiences such pain. What advice and recommendations does she need regarding the possibility of the drug program causing constipation?*

Opioids in any dosage will cause some slowing of bowel function. Therefore, rather than waiting for the constipation to assert itself and then trying to overcome it, it would be preferable to use a preventive approach. In addition to prescribing an opioid analgesic, the clinician should instruct her to take a starting dose of 2 senna-based stimulant laxatives, such as Senokot or its generic equivalent, and 2 docusate tablets (stool softener) as a daily regimen as soon as she starts to take the opioid. If needed, the senna/docusate combination dose can be increased to 2 times daily, depending on her bowel function. It should be emphasized to her that these medications are necessary to maintain normal bowel function for as long as she needs the analgesic.

## Case #2

*A 59-year-old man has stage IV prostate cancer with extensive bone metastasis is that no longer responsive to hormone manipulations. Despite 30 mg of morphine sulfate SA (MS Contin) taken orally every 12 hours and 5 mg of oxycodone as needed for breakthrough pain, he has experienced an increase of generalized bone pain. You plan to institute a cytotoxic chemotherapy program as well as continue zoledronate acid. His last bowel movement was 3 days ago, and his abdomen feels bloated. You prescribe an increased dose of morphine sulfate SA (45 mg every 12 hours) with oxycodone 5 mg for breakthrough pain.*

Some degree of constipation can be expected in any patient who receives opioids; therefore, assessment of the severity of the patient's constipation is needed. The Constipation Assessment Scale (CAS) is a clinically useful 8-item scale designed to determine the presence and severity of constipation (Figure). McMillan and Williams[1] have reported a mean CAS score of 7.1 in patients receiving a minimum of 30 mg of morphine daily. First, use the CAS to determine the severity of the patient's symptoms of constipation. A score as low as 2 indicates some evidence of constipation and requires intervention. A score of 7 to 10 indicates moderately severe constipation. A score of 11 or greater indicates severe constipation.

The scores of the fictitious patient described above are indicated in X's on the CAS example. His total CAS score of 12 indicates severe constipation. Because his constipation is already well established and in the severe range, the first step is to empty the bowel so that he feels less bloated. Give a large dose (4 fl oz) of Milk of Magnesia or 5 fl oz (1/2 bottle) of magnesium citrate immediately to moisten the stool that is in the bowel. Then administer a stimulant laxative to get the bowel moving. Three senna-based tablets would be an appropriate starting dose. If this is not effective within 12 hours, a saline

**Constipation Assessment Scale**

Instructions: Using an X, indicate whether during the past 3 days you have had ***NO PROBLEM, SOME PROBLEM***, or ***SEVERE PROBLEM*** with each of the items listed below.

| Symptom | No Problem (score = 0) | Some Problem (score = 1) | Severe Problem (score = 2) |
|---|---|---|---|
| Abdominal distension or bloating | | X | |
| Change in amount of gas passed rectally | | X | |
| Less frequent bowel movements | | | X |
| Oozing liquid stool | X | | |
| Rectal fullness or pressure | | | X |
| Rectal pain with bowel movement | | | X |
| Smaller stool size | | | X |
| Urge but inability to pass stool | | | X |

Scoring: Add symptom score for a total score that ranges between 0 and 16.
Results: 2 – 6 = mild to moderate constipation
7 – 10 = moderately severe constipation
11+ = severe constipation

In Case #2, the patient's score on the Constipation Assessment Scale is shown by the X's, resulting in an overall score of 12. Source: McMillan SC, Williams FA. Validity and reliability of the Constipation Assessment Scale. *Cancer Nurs.* 1989;12:183-188.

enema is indicated to clear out the lower bowel. Then establish a regimen for him that includes a stimulant laxative and stool softener. His "bowel regimen" should include stimulant laxatives as long as he is taking an opiate. These laxatives are given 2 or 3 times daily. After his bowel is cleared out, begin with 1 at each meal and 2 at bedtime. Increase the dose each day until normal laxation has been established. If the stools become loose or too frequent, decrease the dose by 1 tablet at a time until stools become normal. If this regimen is not well tolerated, consider use of osmotic agents such as sorbitol or polyethylene glycol.

1. McMillan SC, Williams FA. Validity and reliability of the Constipation Assessment Scale. *Cancer Nurs.* 1989;12:183-188.

## Case #3

*A 64-year-old woman received the "7/3" chemotherapy regimen for acute myelocytic leukemia 18 days ago. She has pancytopenia with an absolute granulocyte count of 100/mL and a platelet count of 5,000/mL. She is receiving multiple antiviral, antifungal, and antibiotic agents. She had diarrhea but has passed no stool for 4 days. She is nauseated and has some abdominal distention. Imaging of her abdomen reveals a few distended small bowel loops and a colon distended by stool.*

Under other circumstances, a digital rectal examination would be performed that would reveal whether she has a fecal impaction. If so, the first step would be breaking up the impaction and giving a saline enema followed by stimulant laxatives. However, introducing anything into the rectum (finger, enema tube, or suppository) is an unacceptable risk for this patient because of her low platelet and granulocyte counts.

Since she is receiving multiple antibiotics, one would expect to see diarrhea rather than constipation. In the face of this unanticipated constipation, the possibility of typhlitis (also known as neutropenic enterocolitis or ileocecitis) must be considered. Typhlitis most commonly causes diarrhea, not constipation. However, if the typhlitis has caused paralytic ileus, the described scenario might occur, and she should be assessed for tenderness in the right lower quadrant. If this tenderness is found, especially with rebound, it is desirable to first treat the typhlitis with an agent such as metronidazole (Flagyl) that has activity against anaerobic organisms and allow the typhlitis to resolve. If necessary for comfort, a nasogastric tube may be used for abdominal decompression. Typhlitis occurs exclusively in patients with neutropenia, often if they have mucositis from cytosine arabinoside. The cecum is the most common part of the intestine involved because of the high concentration of bacteria and stagnation of stool in this location. Antibiotic regimens that lack anaerobic bacterial coverage, eg, cefepime, ceftazidime, and aztreonam, can increase the risk for the development of typhlitis. Piperacillin/tazobactam and imipenem provide excellent anaerobic and Gram-negative bacilli coverage to prevent the development of typhilitis. Early diagnosis and treatment will prevent potentially fatal complications such as perforation, local extension of infection, and sepsis. Typhlitis may recur with new episodes of neutropenia, so early institution of antibiotics with anaerobic coverage is good prophylaxis.

## Case #4

*A 69-year-old man has had much prior antitumor therapy for a non–small-cell carcinoma of the lung with extensive bone, liver, lung, and brain metastases. Receiving only supportive care with a hospice program, he is alert but with an ECOG performance status of 3, spending most of his time in bed. Pain is well controlled with ibuprofen, but he is also taking an antacid to protect his stomach from the effects of the NSAID and the prednisone. He has taken amitriptyline (Elavil) for years, and he also takes verapamil, a calcium channel blocker, and oral iron. He complains of abdominal cramps and has not had a bowel movement for 3 days despite good fluid intake, Milk of Magnesia, and docusate sodium.*

The point has already been made that opiates cause constipation. However, other drugs also contribute to constipation, as does inactivity. The laxative regimen this patient is currently receiving clearly is not sufficient to overcome the combined constipating effects of his other medications. In addition to adding a stimulant laxative to his bowel regimen, some changes in his other drug schedule should be considered. The list of drugs that can constipate is long, including antidepressants and anxiolytics, cough syrups, oral iron, antihypotensives and hypolipidemics, NSAIDs, antispasmodics, and $5HT_3$ antiemetic agents, as well as some specific chemotherapeutic agents such as the vinca alkaloids.

In this case, decisions regarding stopping drugs or changing to less constipating alternatives need good clinical judgment. Does he really need oral iron? If so, could it be administered intravenously? Would diltiazem be a good substitute for verapamil? Should amitriptyline be replaced by, for example, nortriptyline or desipramine? Could the NSAID be stopped, thus obviating the need for the antacid for gastric protection? Such changes would likely minimize constipation.

Changes in his medications may not be sufficient to solve his problem with constipation, so prescribing a laxative to be given on a regular rather than an as-needed basis is likely to be of benefit. Polyethylene glycol or a senna preparation each evening would be indicated.

Dosage should be gradually increased until constipation is relieved.

## Case #5

*A 52-year-old woman has liver and bone metastases from breast cancer. She has been treated with tamoxifen for 18 months, but for the last week she has experienced nausea and vomiting as well as constipation. She appears weak and dehydrated and is slightly disorientated. Assessment reveals no focal neurologic deficits, and imaging reveals no intracerebral metastases. Blood studies show normal electrolyte levels but a blood urea nitrogen (BUN) level of 30 mg/dL, creatinine of 1.2 mg/dL, serum calcium of 12.8 mg/dL, and serum albumin of 3.2 g/dL.*

This patient's history, symptoms, and blood values all suggest the presence of hypercalcemia. Breast cancer patients with bone metastases are at risk of developing hypercalcemia. In the face of elevated serum calcium, one can expect mental confusion, dehydration, nausea, vomiting, and constipation.

Although it would be tempting to treat the symptoms rather than the cause, in this case it might be more effective to direct rapid treatment at the hypercalcemia. Thus, one would suggest aggressive hydration, followed by furosemide and treatment with a bisphosphonate such as zoledronic acid. Clinical evaluation will determine whether other measures such as temporary nasogastric suction, close observation for pseudo-obstruction, and evaluation for bowel obstruction or perforation are required.

If constipation persists after the hypercalcemia has resolved, a stimulant laxative such as senna is acceptable for short-term use. However, an osmotic laxative such as Milk of Magnesia or a polyethylene glycol preparation is preferred if the patient has underlying chronic constipation. The development of hypercalcemia in a patient with metastatic breast cancer who has taken tamoxifen for a long period is generally an indication of disease progression, and change to an alternate antitumor treatment program is indicated.