



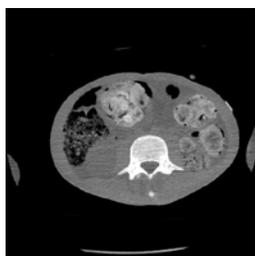
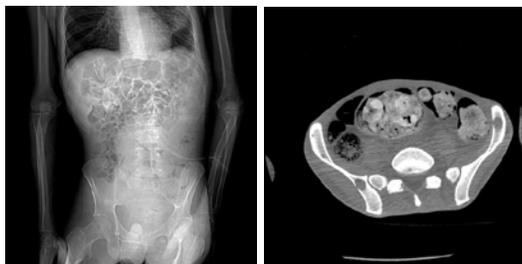
PALLIATIVE CARE CASE OF THE MONTH

Evaluation and Management of Opioid Induced Constipation Allison Jordan, MD

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Case: Mr. AL is a 23-year-old man with invasive squamous cell carcinoma of the tongue who underwent surgical resection, reconstruction and adjuvant chemotherapy. He is admitted to the hospital for failure to thrive and electrolyte abnormalities. He receives all his nutrition and medications through his PEG. For pain he uses roxicodone as needed, typically using 60mg per day. He states that he is having watery stools for the last three weeks. On exam, a large palpable mass is felt in the left lower quadrant, and bowel sounds are hypoactive. An abdominal film was done which showed a large amount of solid fecal material distending the rectum and throughout the colon, particularly in the descending and rectosigmoid colon which was concerning for a fecal impaction.



Discussion: Opioid-induced constipation occurs in 72-87% of palliative care patients and can adversely impact their quality of life. While other side effects of opiates such as nausea and sedation subside with time, constipation is often persistent and presents an ongoing challenge for patients and clinicians. This Case of the Month will focus on evaluation and treatment for opioid-induced constipation. Opioids work on three receptors in the central and peripheral nervous system: mu, delta, and kappa.

Mu receptors are located in the small intestine, and it is believed that opioids bind to these receptors and decrease neurotransmitters such as acetylcholine, vasoactive intestinal peptide, and nitric oxide. This leads to decreased abdominal tone within the intestines and decreased peristalsis. In addition, intestinal fluid secretion is decreased causing hard, dry stools. Opioids also cause dysfunction of the anal sphincter causing incomplete evacuation¹.

Evaluation of constipation begins with first defining the condition. The Rome II criteria define chronic constipation as having at least two of the following for 25% of the defecations over the last three months: straining; lumpy or hard stools; sensation of incomplete evacuation; sensation of anorectal obstruction; the use of manual maneuvers; and fewer than three defecations per week². For palliative medicine patients taking opiates, the onset of constipation is typically shorter. The Bowel Function Index is a validated three-item questionnaire administered by clinicians which assesses ease of defecation, feeling of incomplete bowel evacuation, and patient's personal judgment of constipation³. A thorough physical exam and plain radiographs of the abdomen can provide objective information.

Treatment of opioid induced constipation involves the following approaches: non-pharmacologic methods; treatment with drugs that do not have affinity for opioid receptors; drugs that are opiate receptor antagonists; and manual removal. Non-pharmacologic methods include increased physical activity and fluid and dietary fiber intake. Rotating to a different opiate also may decrease constipation. Second line treatments include laxatives, such as bulking agents, stimulants and osmotic agents which can be given orally or rectally. These agents do not target the mu receptors in the gastrointestinal tract. No studies have compared the efficacy of oral versus rectal routes of administration. A Cochrane review looking at laxatives in palliative care patients found no significant difference between the different laxatives.

Personal details in the case published have been altered to protect patient privacy.

For palliative care consultations please contact the Palliative Care Program at PUH/MUH, 647-7243, beeper 8511, Shadyside Dept. of Medical Ethics and Palliative Care, beeper 412-647-7243 pager # 8513, Perioperative/ Trauma Pain 647-7243, beeper 7246, UPCI Cancer Pain Service, beeper 644-1724, Interventional Pain 784-4000, Magee Women's Hospital, beeper 412-647-7243 pager #: 8510, VA Palliative Care Program, 688-6178, beeper 296. Hillman Outpatient: 412-692-4724. For ethics consultations at UPMC Presbyterian-Montefiore and Children's page 958-3844. With comments about "Case of the Month" call Dr. Robert Arnold at (412) 692-4834.



However, patients should also be counseled about the use of over-the-counter formulations of sodium phosphate products and the risk for cardiac and renal dysfunction if more than the recommended dose is used⁷.

Studies of opiate receptor antagonist methylnaltrexone indicate that it is effective for inducing laxation in palliative care patients^{8, 9}, many of whom are on opiates. Its use is limited by cost (approximately \$50-90 per injection) and side effects including abdominal pain, flatulence, and dizziness.

A final option, if other treatments are ineffective, is disimpaction manually or with the use of an anal retractor¹⁰. Patients need to be medicated to minimize discomfort during the procedure. The disimpaction is followed by an enema and oral laxatives to complete the cleaning process. An abdominal film confirms the evacuation is complete¹¹. Afterwards, patients should be started on a daily bowel regimen to avoid recurrence. This procedure should not be performed in immunocompromised individuals due to risk of bleeding and infection.

Resolution of the case: Mr. AL was evaluated by gastroenterology who recommended a SMOG (saline, mineral oil, and glycerine) enema, with Gastroview (diatrizoate meglumine and diatrizoate sodium) enema, or manual disimpaction if necessary. The SMOG enema was effective.

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