



PALLIATIVE CARE CASE OF THE MONTH

Urinary retention, the sometimes-neglected medication side effect

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Case 1: HT is a 53-year-old woman with a history of pulmonary fibrosis related to mixed connective tissue disorder. She was first seen in palliative care clinic with complaints of depressed mood, anxiety and chronic joint pain. She was started on venlafaxine for her psychiatric symptoms and her pain; however, she experienced side effects including low mood, nausea and dry mouth. For this reason it was stopped, and her pain was managed with as-needed oxycodone 5mg. For her psychiatric symptoms she was started on sertraline 50mg. Approximately six months later she was found to have had some improvement with sertraline, but was still experiencing occasional depressed mood. Sertraline was increased to 75mg a day. The patient then presented for follow up and had complaints of urinary symptoms. They included frequency, hesitancy and overflow incontinence. She found that she sometimes couldn't make it to the bathroom in time and also occasionally woke up at night to find she had wet her bed. She wondered if her symptoms might be due to sertraline because her niece had experienced similar symptoms with escitalopram, and the onset of her urinary symptoms coincided with starting the sertraline.

Case 2: JJ is a 67-year-old man who recently underwent cardiac transplantation for ischemic cardiomyopathy. Several months after his transplant, he developed severe pain on his flank and was admitted to the hospital and diagnosed with a herpes zoster infection. He was treated with antivirals, and palliative care was consulted for pain management. He was treated with 6 to 8mg oral hydromorphone every 3 hours as needed with good control of his pain and was discharged. He presented to the palliative care clinic one week later for follow up of his pain. His usage had gone down since the hospital, but he was still requiring several of the 6mg doses a day. In the clinic, he complained of lower abdominal discomfort and malaise. He also mentioned that he had been having trouble urinating since being discharged. Physical exam revealed a distended, palpable urinary bladder. Abdominal ultrasound showed a grossly distended bladder and bilateral hydronephrosis.

Discussion: When treating palliative care symptoms, clinicians prescribe a variety of medications for symptom management, including opiates, antipsychotics, antispasmodics, benzodiazepines and antidepressants. All of these medications can cause clinically significant urinary retention. For this reason, providers should have some knowledge of which drugs contribute to urinary retention and have strategies for managing it when it does occur.

Urinary retention is defined as impaired bladder emptying which results in post-void residual urine. This can be quite uncomfortable. In extreme cases, it can even lead to renal failure. Etiologies for urinary retention include benign prostatic hypertrophy, malignancy, neurogenic bladder and fecal impaction. Medications are also a common cause of urinary retention. Because the process of urination is complex, many drugs can interfere with it through a variety of mechanisms.

Although the reported incidence of acute urinary retention in the medical literature is relatively low, observational studies have suggested that up to 10% of clinically significant urinary retention is due to medications. There is little data on the incidence of urinary retention in palliative care; however, a small observational study from Australia examined 65 patients enrolled in a large palliative care program who were admitted to the hospital. Fifteen percent of these patients were found to have urinary retention (Carrow).

Medication classes associated with urinary retention include those with anticholinergic properties (antipsychotics, antidepressants and some respiratory agents), as well as opioids and anesthetics, alpha agonists, benzodiazepines, NSAIDs, detrusor relaxants (i.e., oxybutynin), and calcium channel antagonists. Elderly patients are more at risk for urinary retention due to increased prevalence of benign prostatic hypertrophy and polypharmacy.

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.



(Discussion Continued)

Acute urinary retention associated with opioid use is well documented and most studied in postoperative adult patients. Studies have found urinary retention to occur in close to 25% of postoperative patients. Opioids also are known to cause urinary retention in patients outside of the postoperative period, occurring with the use of oral or sublingual medications in the outpatient setting (Verhamme).

Although most providers would recognize urinary retention as a side effect of opioid therapy, urinary retention as a side effect of selective serotonin reuptake inhibitors (SSRI's) is easier to miss. Despite this, studies have found it to be fairly common. One study found that urinary retention occurred in about 10% of patients prescribed SSRI's and when it did occur, it often led to discontinuation of the medication (Uher).

There are several approaches to managing drug-induced urinary retention. The first and most important strategy is to try to avoid it by limiting concomitant use of medications known to cause this problem. Clinicians should also be familiar with the signs and symptoms of urinary retention including bladder pain and tenderness, inability to void normally, and overflow incontinence. Once identified, the acute solution is to catheterize the patient and relieve the bladder distension, if necessary. This allows for time to review the patient's medications and to discontinue the contributing agents.

There are also several novel pharmacologic methods available to counteract medication-induced urinary retention. For example, there are several articles in the medical literature supporting the use of methylnaltrexone to block peripheral opioid receptors and allow for normal urination (Rosow and Garten). In addition, a recent case report describes the reversal of citalopram-related urinary retention by the addition of mirtazapine (Lenze).

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