CLINICAL VIGNETTE

De-Escalation of Opioid Therapy

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Case

A 100-year-old woman presented to the hospital for delirium and increased pain. She was diagnosed with a urinary tract infection (UTI) and calcium pyrophosphate dihydrate (CPPD) flare. Her medical history included heart failure with preserved ejection fraction, moderate aortic stenosis, type 2 diabetes mellitus, chronic kidney disease, peripheral artery disease, history of embolic cerebrovascular events, hypertension, CPPD, and chronic osteoarthritis (OA). The patient was started on intravenous (IV) antibiotics for her UTI, and colchicine and oral steroids were initiated for her CPPD flare. She continued to have worsening pain identified as moaning and screaming, which caused significant distress to the family members at bedside. A trial of low dose morphine, hydromorphone, and oxycodone were initiated, but the patient continued to have uncontrolled pain and episodes of hyperactive delirium.

Palliative Medicine was consulted for pain management and support for the family. The patient was determined to have acute on chronic nociceptive pain and chronic neuropathic pain. Gabapentin was offered but declined by family due to history of somnolence with consumption. The patient was started on standing acetaminophen every six hours for baseline pain control. Her opioid regimen was simplified to as needed oral oxycodone and breakthrough IV hydromorphone, and standing laxatives were added. Family was encouraged to request the oral opioid 30 minutes prior to physical therapy or cleaning. While pain initially improved, the patient was noted to have gradual escalations of morphine equivalent daily dosages without drastic changes in function or mentation. After 48-hours, she continued to have intermittent episodes of intense pain and persistent delirium despite morphine equivalent daily dosages. She also developed new abdominal pain from severe constipation. After discussion with family, decision was made to de-escalate opioid therapy.

Discussion

Opioid use for chronic non-cancer pain is not generally recommended; however, opioids can be appropriately utilized when there is no improvement in symptoms with adjunctive medications.[1] The decision to taper or discontinue opioids should be made collaboratively with the patient, and in order to optimize success, patients should be engaged in shared decision making and motivation.[2] Initiation is often the most difficult aspect of the tapering process and is subject to debate amongst pain management experts. Our recommended approach is consistent with the International Stakeholder Community of Pain Experts and Leaders[3] who call for a compassionate, collaborate plan that avoids rapid, forced tapers or rigid tapering schedules unless patient or community is at risk. Examples include opioid use disorder, or overdose and opioid diversion. The following are criteria for recommending opioid tapering or discontinuation in patients utilizing opioid therapy for chronic non-cancer pain, especially those on long-term opioid therapy[4]:

1) Inability to maintain analgesia despite reasonable dose escalation
2) Intolerable adverse effects at dose that produces effective analgesia with unsuccessful attempts to use alternate opioids
3) Deterioration in physical, emotional, or social functioning attributed to opioid therapy
4) Persistent non-adherence with patient treatment agreement
    a) Taking doses larger than those prescribed
    b) Increasing dose without consulting the clinician
    c) Misusing alcohol or illicit drugs
    d) Injecting or inhaling oral, transdermal, topical, or sublingual formulations
    e) Obtaining medications illegally or inappropriately (illegal opioid dealers, forged prescriptions, family members, the internet, multiple clinicians, multiple pharmacies)
    f) Selling prescription medications or illegal drugs
    g) Not adhering to nonpharmacologic components of treatment or refusing monitoring (e.g., pill counts, urine drug testing, or opioid use contract)
    h) Behaving in a manner that is intimidating or threatening to care providers
5) Resolution of the pain
6) Any patient who is taking greater than 90 MME or concurrently using additional sedative medications

Prior to initiating an opioid taper, the clinician and patient should agree on the goals of the taper and the markers of success as well as discuss the rate of taper. Determining the therapeutic endpoint for patients undergoing opioid tapering can be challenging. While the ideal would be to have the patient completely tapered off opioids and pain only managed by nonopioid medications and adjunctive therapies, this is often difficult, and in some cases, not realistically possible. One recommendation to establish tapering goals is to target the reason behind initiating the taper. For example:

- If side effects are the primary concern, dose reduction with or without rotation to a different opioid may be the therapeutic endpoint.
- If ineffective analgesia is the reason for tapering, improvement of analgesia with dose reduction, opioid rotation, or discontinuation may occur as a result of opioid-induced hyperalgesia.
- If safety is a concern due to harmful misuse, diversion, or concomitant use of illicit substances, then a rapid and complete discontinuation may be indicated along with referral for opioid use disorder and medication-assisted treatment (MAT).
- In some cases where opioids may need to be continued, consideration and agreement to rotate to a potentially safer formulation, such as buprenorphine, or consider continuing a lower dose of the opioid on an as needed basis.

Communication strategies that focus on fostering a sense of collaboration between the patient and the clinician and enhances the provider-patient relationship can improve the chance of success. We recommend utilizing motivational interviewing principles during these discussions. The Stanford Center for Continuing Medical Education provides a free, 90-minute online course for clinicians on opioid tapering and provides specific guidance on opioid-related conversations with patients.[5] Lastly, we recommend offering naloxone to all patients and their families during opioid taper and to educate them about the increased risk of overdose related to rapid decrease in opioid tolerance during taper.[6]

When determining the most appropriate opioid tapering strategy to utilize, it is important to keep in mind that a primary goal is to avoid or minimize symptoms of opioid withdrawal. To avoid withdrawal, the most important aspect of the taper is to reduce the opioid dose slowly. Patients who chronically take opioids daily become physically opioid dependent and are at risk for withdrawal if the opioids are discontinued too quickly. The Department of Health and Human Services[6] and the Centers for Disease Control and Prevention[7] recommend an approach that bases the initial rate of taper on the duration of the patient's opioid use with slower taper for patients who have been using opioids for a longer period of time. This approach can be modified for individual patient preferences and clinical circumstances. The following are examples of opioid tapering depending on length of opioid usage:

- For patients on long-term opioid treatment for >1 year, aim to taper by 10% of the starting dose every month.
- For patients who have been on long term opioid treatment for <1 year, aim to taper by 10% of the starting dose each week.
- For patients who take opioids less frequently than daily, there is no formally prescribed tapering schedule. For these patients, an agreed upon target discontinuation date can be set. The provider can typically prescribe approximately 50% fewer pills than the existing prescription, and the patient can then plan to self-taper by taking fewer pills for each dose over time.[8]

Opioid tapering may take months to years depending on the patient's opioid dose. During a taper, avoid going backwards, or increasing opioid doses as this creates unclear messaging to the patient, and it is rare that increasing the opioid dose can be done without encountering the same issues that prompted the taper initially. Multiple tapering strategies and online resources have been published to assist clinicians in determining an appropriate tapering algorithm.[9,10]

Our patient was taking opioids for chronic non-cancer pain with increasing MEDDs without significant improvement in pain or delirium. She developed opioid-induced constipation which contributed to pain and delirium. Because the side effects outweighed the benefits of therapy, de-escalation of opioids was appropriate. We first established rapport and trust with both the patient and her caregivers through empathetic presence and listening. Extensive education regarding pain and delirium was provided as well as correlating objective data of morphine equivalent daily dosages with reports of signs of distress by the family. We elicited conversations regarding the patient's and family's treatment preferences. The family clearly expressed their hope to return patient back to her pre-hospitalization baseline through physical therapy and intensive caregiving. After establishing this goal, a joint decision was made to de-escalate opioids while increasing adjunctive therapies and treating constipation. As opioids were reduced and constipation resolved, the patient's mentation and pain slowly improved. While her pain never completely resolved, we were able to establish a pain control plan centered on the patient's and family's treatment preferences and goal of functional improvement.

Pain is distressing to patients, families, and treatment teams. Opioids are often initiated and escalated with intent to relieve suffering; however, complete elimination of pain is unrealistic and can be dangerous to pursue. The authors recommend to always question whether a medication is truly helping a patient's current problem. If the side effects and risks outweigh the benefits, it may be appropriate to de-escalate the medication, especially in geriatric populations. Many studies have found that de-escalating medications in the older adult population is safe and effective[11] and a similar approach could be utilized when de-escalating opioid therapy.

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