Kidney Medicine

Pain Management in Patients With Kidney Disease—Patients Deserve a Prescriber With Specialty Expertise: KDOQI Controversies Series

Bethany Pellegrino and Rebecca J. Schmidt

Pain is one of the most commonly identified symptoms in patients receiving kidney replacement therapy,[1] yet prescribing practices for the management of pain in this patient population are not uniform and criteria for determining who is best suited to manage pain in dialysis patients remains a subject of debate. The responsibility for managing pain in these patients may fall to the nephrologist by default given current rounding practices whereby frequent interactions with patients place nephrologists in the position to identify and manage many nondialysis medical issues. Although nephrologists are poised to provide comprehensive care for their dialysis-dependent patients, the optimal management of pain requires an approach that may be outside the realm of professional responsibility and scope of training for many nephrologists.

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The opioid crisis has affected the health of much of America, prompting efforts during the last decade to provide clinician guidance on appropriate pain management. The Centers for Disease Control and Prevention (CDC) provide a 12-step process to identify, treat, and manage patients requiring opioid therapy.[2] This complex process begins with determining when to start opioid therapy in patients with chronic pain. Nonpharmacologic treatment and nonopioid medication are recommended as first-line treatment options and may include exercise, massage, or cognitive behavioral therapy.

Before initiating opioid therapy, dialogue outlining the benefits and risks of opioid therapy is recommended as part of a shared decision-making discussion with the patient. Goals for pain relief and criteria for both escalation and discontinuation of therapy are essential to the plan of care and should be discussed with and agreed on by the patient. Close follow-up of patients receiving any pain medication is recommended for the duration of treatment, along with monitoring of the state pharmacy database for controlled substance prescribing. Drug testing may be appropriate for some patients and screening patients for their risk for opioid use disorder along with continued observation and a heightened awareness for the signs of opioid use disorder are integral to safe prescribing and the responsibility of the opioid prescriber.

Despite the availability of guidelines, reports of successful implementation of the World Health Organization Pain Ladder (Fig 1)[3] and the high prevalence of pain[4] in dialysis patients, pain management in these patients has been suboptimal[5] on both ends of the treatment spectrum. Undertreatment of pain is associated with shortened or missed treatments and adverse outcomes including hospitalizations.[6] In contrast, high rates of opioid prescribing in the US end-stage kidney disease population are also associated with significant morbidity and mortality. In a 2017 review of opioid prescribing practices, two-thirds of dialysis patients had received at least 1 opioid prescription in the past year and 20% of patients were prescribed opioids long term, with one-quarter prescribed doses above the amounts recommended by the CDC. A significant association between opioid dose and dialysis patient mortality was observed in patients receiving opioids under these prescribing practices. Rates of dialysis discontinuation, death, and all-cause hospitalizations were higher in patients prescribed opioids, leading the authors to call for appropriate interventions for the management of pain in dialysis patients.[7]

Dialysis patients may be prescribed opioid treatment by a variety of practitioners, including their nephrologist. Although there is guidance for clinicians on safe and efficacious opioid prescribing in the literature, in patients at risk for adverse effects from opioids (older patients, pre-existing cardiac or pulmonary disease, gait unsteadiness, and cognitive impairment), referral to a pain management specialist likely has benefits for patients.[8] Opioid use poses significant risk to the dialysis-dependent patient who typically takes multiple medications for an array of chronic but active illnesses. Those at risk for opioid use disorders and other adverse outcomes, as well as those undergoing special life circumstances, may especially benefit from evaluation by a pain management specialist. The spectrum of pain experienced by dialysis patients is varied and may be atypical and severe,[9] requiring escalating medication doses that place patients at risk for adverse events.[10] Dialysis patients often have additional risk factors for adverse events associated with opioids, such as age, pre-existing lung or heart issues, and underlying cognitive impairment. In these instances, management by a specialist trained in the science of pain management is likely to provide additional safety benefit.

Physicians working outside the scope of their specialty training may provide lower quality care than colleagues specially trained in a given discipline. A 2002 study looked at subspecialists caring for hospitalized patients outside their specialty and found longer hospital lengths of stay and slightly higher mortality rates.[11] Several studies evaluating diabetes management by nonendocrinologists have

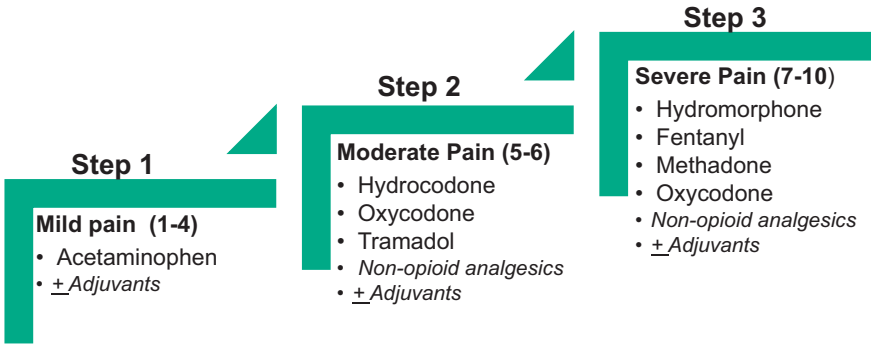

Figure 1. The World Health Organization three-step analgesic ladder modified for patients with kidney failure.

shown trends toward better process outcomes in patients followed up by specialists.[12] Similar findings have been demonstrated in rheumatology and cardiology when management of rheumatoid arthritis and heart failure, respectively, was provided by physicians without specialty training.[13,14]

Similar to the practice of referring a patient with a cardiac, rheumatologic, respiratory, or other organ-specific illness to the respective experts in that field, the intricacies of pain management speak to the potential for pain management specialty care providing added benefit to any patient but particularly those with the complex medical conditions typically associated with chronic kidney failure. Further, the complexities of pain management in dialysis patients may be beyond the scope of training for many nephrologists. Current educational curriculums of residency and fellowship may lack training in pain management, leaving many nephrologists ill-equipped to adequately manage pain without assistance. Moreover, nephrologists may not be trained in the recognition or management of opioid use disorder, an important skill for the responsible provider. Surveys of medical trainees have identified inadequacy in pain management training, leading to discomfort and uncertainty with the management of chronic pain in patients.[15] While training in pain management fellowships is a growing area of interests with increasing number of training positions, currently the subspecialty training is only available to residents in anesthesiology, physical medicine and rehabilitation, neurology, and emergency medicine.

In addition to the lack of training as an identified barrier to providing appropriate pain management, a lack of time places constraints on the typical rounding nephrologist attempting to meet the various requirements of comprehensive dialysis patient care. Data collected from the international Dialysis Outcomes and Practice Patterns Study (DOPPS) show that the average contact between a dialysis patient and their nephrologist in the United States is between 6 and 8 minutes 2 to 4 times a month.[16] As part of the monthly dialysis visit, time is needed to discuss the patient's response to their day-to-day treatment, as well as general management goals for achieving dialysis adequacy, ensuring appropriate dry weight, monitoring the functionality of dialysis access, and management of renal bone disease, anemia, and nutrition. Ensuring that the patient has access to transportation, medications, and other medical care also may consume much of the interaction between patient and physician. Nephrologists also participate in serial dialysis care planning processes and facility quality improvement and monitoring projects. To appropriately manage pain in even a small number of the patients encountered while rounding at a dialysis unit requires time in excess of that needed for medical care of kidney disease and dialysis-related issues. Further, attention to and the interactive discussion required of informed consent, contractual agreements, education with regard to ramifications of opioid use,[8,17] all necessary components of safe prescribing practices, consumes time and diverts the focus away from kidney disease and the dialysis-related care for which the nephrologist is solely responsible.

The nephrologist is well positioned to identify patients who might benefit from specialty care for the treatment of chronic pain. The availability of specialty expertise in pain management may be a limiting factor, but inherent in our professional obligation as physicians to first do no harm is the obligation to recognize our own limitations and refer patients to the appropriate specialists, when and if available. The pain management clinician may offer a more holistic approach with nonpharmacologic treatments along with medication management. In addition, the infrastructure of a pain management clinic provides a private setting in which to counsel and monitor patients in a secure environment. When the patient is evaluated by a pain specialist, the nephrologist's input into safe and appropriate dosing of medications, particularly in relation to their handling by dialysis, will remain helpful. Dialysis patients are known to require a multitude of medications and thus warrant a high level of scrutiny and sophisticated knowledge of the impact of dialysis on drugs and the potential for drug interactions.

In summary, many dialysis patients experience pain and management of pain in this population of patients has been suboptimal. Nephrologists may be uniquely poised to provide care for illnesses other than those directly related

to kidney disease. However, they may not have the time or training to do so in a manner that is safe and/or most beneficial to their patients. Moreover, patients are entitled to the benefits of subspecialty referral and the area of pain management should be considered similarly to other subspecialties such as cardiology and rheumatology. Co-management may be needed to optimize treatment strategies and ensure safety as part of a deliberate and thoughtful approach to managing pain in this vulnerable population. Although the depth of a nephrologist's relationship with their patient likely offers opportunity for collaboration in the management of pain, we believe that opioid management in most of our dialysis patients experiencing chronic pain is optimally achieved by a pain specialist.

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