PALLIATIVE CARE CASE OF THE MONTH

"Opioid Use Disorder or Complex Persistent Opioid Dependence?"

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Case: Mrs. A is a 60-year-old woman with a history of chronic nonmalignant pain on long term opioid therapy. She was being followed in a pain management clinic and treated with low dose opioids and gabapentin when she developed breast cancer and peripheral neuropathy related to chemotherapy. A year later, she was diagnosed with CML and was eventually referred to the palliative outpatient clinic. Over the succeeding ten years, her opioid doses were increased, though she is now no longer requiring cancer-directed therapy. Her pain is due to a variety of causes, including vertebral fractures she sustained from a fall, osteoarthritis in her knees, chronic nonspecific lower back pain, and neuropathy. She is currently prescribed 16 milligrams of oral hydromorphone up to eight times a day. Her clinician notices that she is focused on her opioid doses and frequently asks for increases; she is on one-week prescriptions because of a history of running out early. She is referred for an addiction assessment.

During this assessment, the patient relates that she does not have cravings for her opioids and has never taken any non-prescribed opioids. She has no history of using illicit drugs. She tells the clinician, "I have real pain", stating that opioids are the only medications that will help her. She does not understand why the prescribing clinician will not increase her doses. She appears anxious and asks repeatedly if the clinician wants to take her off her hydromorphone.

Discussion: For patients such as Mrs. A who are prescribed opioids, tolerance and withdrawal are not sufficient to diagnose an opioid use disorder (OUD). The patient must exhibit other signs, such as craving, inability to control use, and continued use despite harmful consequences.[1] Mrs. A denied all of these. Other criteria include giving up important activities and failing to fill role responsibilities due to use of the substance. Mrs. A has been unable to do most of the things she would like to do; however, she says this is because of her pain, not her medication. Mrs. A fits criteria for a proposed diagnostic category of Complex Persistent Opioid Dependence (CPOD), which some refer to as Opioid-Induced Chronic Pain (OICP).[2]

The Basis of CPOD

Pain is commonly described as nocioception, as when a tissue is injured and nocioceptive signals are sent to the spinal cord where they are perceived as physical pain. Opioids act on mu-receptors to block these pain signals. However, the perception of pain also includes affective (emotional) and cognitive components as well. Cognitive appraisals of the pain and its consequences generate meanings beyond the physical sensations involved. These in turn can increase the patient's emotional reactions to the pain and worsen depression or anxiety.[3]

The psychology literature describes an affective balance in the brain between positive and negative affect. Opioids have the potential to change that balance, to shift from a negative emotional state (which could be caused by anxiety about pain, or psychiatric diagnoses such as PTSD or depression) to a more positive one. However, there is a price to pay: the opponent effect, in which the system rebalances towards negative valence. Over time, this effect grows, as the duration of the positive effect decreases. Eventually, higher doses of opioids are required to attain a positive affective balance, and the duration of positive affect becomes shorter. This phenomenon is thought to be separate from physical tolerance and withdrawal; however, the combination of a shorter period of affective relief as well as the need to avoid opioid withdrawal combine to produce an increase in perceived baseline pain and opioid need, without any change in the physiologic driver of the pain. Furthermore, the opponent effect causes the baseline pain level (as well as level of dysphoria) to increase over time – causing the development of CPOD.[4]

What is CPOD?

Patients with CPOD perceive their opioid regimen as effective, due to the immediate relief that each dose provides, and the resultant increased pain and decreased function when each dose wears off. They may have a strong belief in physiologic driver(s) of their pain and that opioids are the only effective treatment. They experience anxiety and other strong emotions when tapering is brought up or attempted.

There has been controversy about whether CPOD is a variant of opioid use disorder; the neurobiological processes described above are identical to those in opioid use disorder.[5,6] In addition to tolerance and withdrawal, proposed diagnostic criteria for CPOD include the use of opioids to cope with physical or psychological stressors; certain pain or opioid related beliefs, including that opioids are essential for pain management; and the development of psychological and/or physical symptoms, such as pain flares, when a guideline-concordant taper is attempted.[7]

Management of CPOD

Recommendations for management of CPOD are based on expert opinion. An initial challenge is working with the patient's ideas about the nature of their pain. For both the clinician and the patient, it is helpful to re-focus goals on function rather than a specific pain level. Acceptance and commitment therapy[8], pain reprocessing therapy[9], and motivational interviewing[10] each can offer benefits in changing the way an individual relates to the perception of pain. In terms of managing prescribed opioids, one initial strategy is to hold opioid doses steady, taking care not to increase doses in response to reports of increased pain, knowing that chronic pain naturally has a fluctuating quality. A second step might be rotate to long-acting opioids alone, without any as needed dosing. Several authors recommend buprenorphine as the preferred opioid in CPOD[2,11,12]. Rarely, a patient may be able to taper completely off prescribed opioids.

Return to Case: The clinician empathized with Mrs. A's experience of iatrogenic opioid dependence and worsening pain and recommended a rotation to buprenorphine with the hope that it would eventually be a better regimen for her. Mrs. A reluctantly accepted. After a low-dose initiation, and some challenges with pain flares, within a few weeks she had increased to 16 milligrams a day. She was referred to a pain psychologist. Her hydromorphone is now slowly being tapered over a period of months. At her last clinic visit, Mrs. A reported that she is now back to going for long walks and swimming laps.

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