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EDITORIAL

Getting Good or Getting Well?

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I remember several instances where I clearly displayed my ignorance about substance abuse when taking care of patients in the emergency department. The common experience was with the patient labeled "drug seeking." It was such an ego boost to feel that I had "caught" the patient just trying to get a prescription for an opioid. Oh, how I could judge that patient's moral compass. Having them storm out cursing my name was a badge of accomplishment. No one was pulling the wool over my eyes! I also have a distinct memory of caring for a patient who stated she was an addict in recovery. I thought her acute problem required opioid pain relievers, but said, "I'll just give you ten 'Tylenol #3,' since you are an addict." And I praised that patient for her honesty and abstinence. I did not have a clue! Patient number 1 was "bad" and patient number 2 was "bad" in the past, but became "good."

Very little was known about the pathophysiology of addiction until about 10 years ago, well after I completed residency and fellowship training. I do not remember much, if any, education about addiction in medical school. We discussed withdrawal often in residency. Most days of my residency, we let an alcoholic sleep off "a drunk" until he/she wanted to eat breakfast. We called it "sandwich pharmacokinetics": when the alcoholic wakes up and asks for a sandwich, the ethanol level has dropped enough for safe discharge. If an alcoholic was in mild withdrawal or wanted to stop drinking, we often sent him/her home with a prescription for a benzodiazepine and a social service referral. Of course we counseled them and expected they would quit drinking. According to the Fellow's Perspective in this issue, medical education in this area is still lacking.

I am not proud of any of this. Fortunately, I have learned much more about addiction in the last 10 years, but I fear it is still misunderstood by many healthcare practitioners. While this issue of Journal of Medical Toxicology focuses on opioid abuse and misuse, little addresses addiction directly. As medical toxicologists, I believe we cannot ignore the disease of addiction, whether we practice primarily as toxicologists or as other specialists. In the past, most lay people and medical professionals believed addiction was strictly due to personal weakness. This is sometimes referred to as the "moral model." However, recent research supports the "disease model" of addiction. "Disease" implies that an organ is affected in a way that causes clinical effects. The conceptual gap in our understanding occurs when we try to make a distinction between mental and physical disease. If a disease affects neurotransmitter behavior, is it mental or physical?

Although it is much easier to understand the body's regulatory mechanisms with something objective, like temperature, understanding the regulation of pleasure is much more challenging. Normally, the midbrain functions for human survival. When nucleus accumbens dopamine release is stimulated, man is incited to eat, kill (if necessary), and procreate. In those with the predisposition to addiction, dopamine release in response to a drug sets up a series of events that seems to move the need for more drug up the hierarchy of survival [1]. Drug withdrawal in addicts is associated with decreases in dopamine and dopamine D2 receptors [2]. Corticotropin releasing factor (CRF) regulates dopamine release, and when CRF is unable to trigger the dopamine release required to feel pleasure, the rheostat is reset and more dopamine is required to produce the same degree of pleasure [3]. This tolerance results in the addict using drug to just feel "normal," rather than using to feel pleasure. Alterations in glutamate homeostasis produce craving in the addict [4]. While using is a choice, craving is not.

Why is this important? We would all be happier if there was a laboratory test that identified addiction. But at this point, that test does not exist. The successful treatment of

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addiction requires that healthcare providers understand the disease model. Although there are several different treatment models for patients with addiction, I believe that is starts by the recognition that addicted patients are sick rather than bad. We are here to treat illness, not punish those with illness. Many emergency physicians feel they are too busy to spend time counseling about addiction. However, when someone has a high blood sugar and typical symptoms for diabetes mellitus, we do not judge them and then send them out the door. We take some time to explain the disease and the treatment.

Much of the information in this special issue can be used to understand patients with addiction. The dangers of opioids are clear, and alternatives to opioids in the treatment of pain are reviewed. Addiction has been proven to be a neurochemical disease, and we now understand that one cannot be responsible for having this disease. However, patients *can* be responsible for treating their disease. Addiction should be addressed with the same objectivity and professionalism that we use for patients with other diseases.

Today, if I suspect addiction in an emergency department patient, the first thing I do is look for the patient's history of prescription use in the state prescription drug monitoring program, online. Armed with the print out from the program, I offer the possibility that the patient may have a problem other than pain. I do not try to deny that the patient has pain, because I will never really know that. I explain that addiction is a disease and that the patient is sick, not bad. But I do emphasize that the patient needs to treat the disease and I offer some suggestions for treatment. Alcoholics Anonymous and Narcotics Anonymous programs in most parts of the USA have someone available to talk 24 h a day, 7 days a week. A toll-free number can be located for these programs on the internet and can be given to the patient. My decision to withhold opioids is based on objective information about addiction as well as the pain problem, and each case is different.

It is appropriate to be concerned about loose prescribing habits and the misuse of opioid analgesics by addicts. Given the role medical professionals have played in the morbidity and mortality associated with opioids, more than with any other drug of abuse in all of history, we should commit to be part of the solution, rather than the problem.

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