Opioid utility and the clinician

The opioid crisis in America which has spread to Europe and has brought increasing scrutiny to opioid therapy. Illicit fentanyl and fentanyl analogues have dramatically increased the mortality. Physicians, as a result, at least in United States have stopped prescribing opioids altogether or continue to prescribe but frequently without a firm knowledge of opioid pharmacology (1). Myths abound about opioids and are passed down by oral tradition to generations of prescribers (2,3). It is my hope that this special addition in the Annals of Palliative Medicine will clarify some of these misunderstandings.

Opioid utility is a dimension of opioid pharmacology for which physicians unlikely to be aware. I have been fortunate that world class clinicians and academicians have agreed to address opioid utility. Dr. Dahan's group have been on the forefront in the science of utility and have ably demonstrated that efficacy and toxicity (respiratory depression) are not linearly related to dose. Utility changes with time and dose (4). Their review which starts the series, provides a foundation for the rest of the contributions.

Mary Lynn McPherson from the University of Maryland is well known for her two text editions on equianalgesia. She reviews equianalgesia and shares her wisdom concerning the shortcomings to equianalgesic tables. In my estimation equianalgesic tables are only half the story. Fentanyl and buprenorphine are nearly equianalgesic but very dissimilar when gauging equitoxicity from respiratory depression (5).

Utility is diminished or enhanced by drug-drug combinations. Dr. Overdyk and colleagues discussion the dangers of combining opioids and benzodiazepine. Their discussion should give clinicians second thoughts about combining these two classes of drugs.

Utility is also population dependent. Dr. Cheung's review is extensive on the subject. His review of at-risk populations will help prescribers determine risks and benefits to starting opioid therapy depending on the population whom they are serving. A second contribution by Dr. Vozoris centers on patients with chronic lung diseases. He has demonstrated that opioids contribute to the morbidity and mortality of patients with chronic obstructive lung disease by causing in addition to worsening respiratory failure; pneumonia and cardiovascular adverse events (6-8).

Methadone has been used for both opioid maintenance therapy but has been increasingly used as an analgesic. It is inexpensive, effective with reduced drug liking effects but has precarious drug interactions and unique cardiovascular toxicity. Levorphanol has a similar receptor binding profile to methadone but does not have the cardiovascular toxicity or drug interactions of methadone. Dr. Reddy and colleague from MD Anderson Cancer Center provide an up-to-date on this "forgotten" opioid.

Our group provides an extensive qualitative review on opioid tapering. Few physicians have been taught how and when to taper opioids or the methods to tapering or the pitfalls such as chronic persistent tolerance or an emerging opioid use disorder (9).

Finally, we provide a review on the risks associated with fentanyl. This opioid is highly extractable from patches, has a narrow utility and a unique toxicity (the wooden chest syndrome) which kills within minutes. The opioid crisis has become riskier with this opioid on the streets. My hope is that this review will make prescribers a bit more conservative about using fentanyl in the community.

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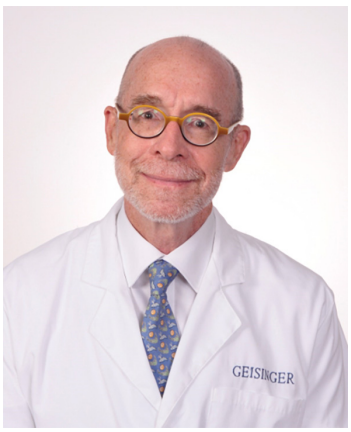

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