EDITORIAL

The opioid crisis: an opportunity to alter morbidity through the implementation of enhanced recovery after surgery protocols during spinal surgery?

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THE National Institutes of Health (NIH) has launched a program to attempt to combat what is perceived as an epidemic of opioid use disorders in the US. The Helping to End Addiction Long-term (HEAL) program attempts to provide scientific solutions to the opioid crisis.⁶

Due to the nature of Canadian healthcare delivery, the impact of the problem is readily tracked in our society. The problem of opioid use disorder (OUD) is now of such magnitude that death due to opioid abuse in Canada exceeds the prevalence of traffic accident mortalities.¹ According to the Canadian Institute for Health Information, the opioid-related death rate in Canada has reached 11.2/100,000 population.³

The epidemic of opioid abuse is in part due to the rise in the use of prescription opioids. Since the 1980s, the volume of opioid prescriptions has reputedly increased by 3000%, with a current prescription rate of 1 in 6 Canadians.¹ Unfortunately, a large proportion of legally derived opioids are diverted to nonmedical uses or are shared among family members.

The HEAL program in the US has identified 26 research priorities in a strategy to combat OUD. Aside from attempting to treat and prevent addiction, the HEAL has identified the enhancement of pain management as one of the pillars of addressing this crisis. This includes understanding the biological basis of chronic pain, accelerating the discovery and preclinical development of non-addictive pain treatments, advancing new non-addictive pain treatments, and establishing the best pain management strategies of acute and chronic pain conditions.

While the harms of addiction and opiate-related deaths are readily acknowledged, the impact of opiate use on the surgical patient is less well understood. Recently, DiGiorgio and colleagues reported the increasing frequency of spinal epidural abscesses related to intravenous drug use,⁴

and although the consequence of intravenous drug abuse might be readily apparent, the impact of chronic OUD, including prescription narcotics, is less well delineated.

In this issue of *Neurosurgical Focus*, Martini and colleagues have now published an analysis of the impact of OUD on the outcomes of lumbar fusion procedures.⁵ The authors studied a group of nearly 140,000 patients derived from the National (Nationwide) Inpatient Sample (NIS) database. In this population, 0.91% were identified with a concurrent OUD diagnosis. The OUD group was found to have a significantly higher rate of perioperative complications, prolonged hospital stay, and higher odds of nonhome discharge. Although there is some variation depending on the procedure performed, OUD was associated with significant morbidity for spine patients.

Of interest, much of the morbidity the authors identify would not usually come to mind when considering OUD. The study cites increased rates of pneumonia, pulmonary embolism, venous thromboembolism, anemia, wound infections, urinary tract infections, and the need for tracheotomy.

The authors do acknowledge that the retrospective use of the NIS database has several limitations. The relationship to opioid use to the extent of disease and the magnitude of the surgery is thus not necessarily captured. Despite this shortcoming, the study should prompt us to study the impact of OUDs prospectively.

Strategies to reduce acute perioperative pain is a major goal of enhanced recovery after surgery (ERAS) and thus conceptually falls firmly as one of the research priorities identified by HEAL. The advantages of ERAS in the reduction of opioid requirements perioperatively are eloquently presented by Brusko and colleagues in this issue of *Neurosurgical Focus*.²

Although the study by Martini and colleagues does not

directly analyze the impact of ERAS protocols on opiate use, the authors do go on to conclude that ERAS might provide optimal care for the OUD population. The extrapolation is not entirely inappropriate in the light of the study by Brusko and colleagues.

As ERAS becomes more widely applied for spinal procedures, we should be able to study this subject in more detail. Aside from the opportunity to alter perioperative risks, reduction of the use of opioids might also have a significant impact on public health at large.

<https://thejns.org/doi/abs/10.3171/2019.1.FOCUS1944>

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Disclosures

The author reports no conflict of interest concerning the materials or methods used in this study or the findings specified in this paper.

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DOI: 10.3171/2019.1.FOCUS1944.