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Letter to the Editor

Opioid overdose causes arrhythmia and increased mortality: Consider individual agents and related factors

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I read the article entitled "Burden of arrhythmia in hospitalizations with opioid overdose" by Doshi et al. [1]. The authors revealed that hospitalization due to opioid overdose was associated with higher risk of arrhythmia and this, in turn, led to higher in-hospital mortality, longer hospital stay and eventually higher cost of care. This study is significantly important due to a significant increase in the misuse of opioids and associated events in the past 2 decades. Among them, arrhythmia is an important adverse event [2,3].

I have a few concerns regarding this study: First, authors have not defined what is considered as "opioid overdose" as the upper limit of overdose differs among different opioids. Additionally, this study does not differentiate the arrhythmogenic potential of an individual agent because different opioids have a variable effect on the cardiac conduction system [3]. Also, the impact of new onset of arrhythmias on mortality is questionable. Even though methadone has the highest arrhythmogenic effect, the majority of the opioid death is attributable to the use of heroin and synthetic opiates other than methadone [2]. Moreover, there is no information on multiple other drugs commonly consumed with opioids such as cocaine and benzodiazepines which are independently associated with cardiovascular events including arrhythmia [4]. Finally, there was no information about the management of opioid overdose. There are cases of ventricular tachycardia after naloxone administration, a commonly used treatment in opioid overdose [5].

In conclusion, opioid overdose is associated with arrhythmia. However, the results should be interpreted with caution after considering all the confounding factors.

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Disclosure

The authors have nothing to disclose.

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