LETTER TO THE EDITOR

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DEXMEDETOMIDINE AND ITS INCREASING APPLICATION IN NONOPIOID DETOXIFICATION

Dear Editor:

I read with great interest the recent article by Nasr et al. in a recent issue of your esteemed journal.[1] The article was highly thought provoking. Interestingly, dexmedetomidine is also useful in other nonopiate detoxifications.

For instance, dexmedetomidine is of great benefit in cocaine detoxification. It attenuates the increase in myocardial consumption of oxygen as well as reduces the tachycardia induced by cocaine by virtue of central sympatholysis.[2,3] Dexmedetomidine also decreases the dopaminergic response to cocaine intake thereby augmenting the threshold to cocaine-induced seizures.[4] Especially, patients who have to undergo cerebral angioplasty for cerebral vasospasm following cocaine withdrawal benefit from dexmedetomidine administration.[5] Dexmedetomidine is also useful in mitigating hypertensive emergencies especially in individuals with cocaine-induced aortic aneurysms.[6]

Similarly, dexmedetomidine can decrease the accentuated cardiac stimulation seen following intoxication with stimulants such as methylphenidate.[7] It also mitigates the associated peripheral sympathetic effects and behavioral changes such as agitation. Besides this, dexmedetomidine is also highly useful in attenuating the symptoms of opioid withdrawal especially in new born infants and pediatric patients.[8,9]

The above examples clearly illustrate the benefits of dexmedetomidine in cocaine and methylphenidate detoxification and the need for further studies to fully study its safety.

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REFERENCES

1. Nasr DA, Omran HA, Hakim SM, et al.: Ultra-rapid opiate detoxification using dexmedetomidine under general anesthesia. *J Opioid Manag.* 2011; 7: 337-344.

2. Kersten JR, Pagel PS, Hettrick DA, et al.: Dexmedetomidine partially attenuates the sympathetically mediated systemic and coronary hemodynamic effects of cocaine. *Anesth Analg.* 1995; 80: 114-121.

3. Menon DV, Wang Z, Fadel PJ, et al.: Central sympatholysis as a novel countermeasure for cocaine-induced sympathetic activation and vasoconstriction in humans. *J Am Coll Cardiol.* 2007; 50: 626-633.

4. Whittington RA, Virag L, Vulliemoz Y, et al.: Dexmedetomidine increases the cocaine seizure threshold in rats. *Anesthesiology.* 2002; 97: 693-700.

5. Farag E, Chahlavi A, Argalious M, et al.: Using dexmedetomidine to manage patients with cocaine and opioid withdrawal, who are undergoing cerebral angioplasty for cerebral vasospasm. *Anesth Analg.* 2006; 103: 1618-1620.

6. Javed F, Benjo AM, Reddy K, et al.: Dexmedetomidine use in the setting of cocaine-induced hypertensive emergency and aortic dissection: A novel indication. *Case Report Med.* 2011; 2011: 174132.

7. Bagdure DN, Bhoite GR, Reiter PD, et al.: Dexmedetomidine in a child with methylphenidate intoxication. *Indian J Pediatr.* 2012 (in press).

8. Finkel JC, Elrefai A: The use of dexmedetomidine to facilitate opioid and benzodiazepine detoxification in an infant. *Anesth Analg.* 2004; 98: 1658-1659; Table of contents.

9. Oschman A, McCabe T, Kuhn RJ: Dexmedetomidine for opioid and benzodiazepine withdrawal in pediatric patients. *Am J Health Syst Pharm.* 2011; 68: 1233-1238.