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Letter to Editor

Digoxin for Atrial Fibrillation in Spinal Anesthesia

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Atrial fibrillation (AF) is the most common perioperative arrhythmia. The incidence of new AF seems to increase in elderly patients undergoing surgery. Management of intraoperative AF can be challenging due to surgical irritation, bleeding, vital signs instabilities and fluctuations in intravascular volume. Rapid ventricular rate in AF (ventricular rate ≥110/min) needs to be treated promptly because it may cause left ventricular dysfunction due to decrease in coronary blood flow and diastolic filling time [1].

Digoxin has been traditionally used to treat AF for many years, however, it is not considered as the first line therapeutic option in AF patients. But recently, it has been re-considered for the treatment of AF and approximately 30% of patients with AF are still treated with this drug worldwide [2].

Neuraxial anesthesia is recommended as an accepted option to minimize the perioperative complications in the geriatric patients [3]. Dealing with AF rhythm in elderly patients under spinal anesthesia is challenging for anesthesiologists. Using beta-blocker, amiodarone and calcium channel blocker drugs for treatment of new onset of and/ or rapid response AF [1] can aggravate hypotensive effects of spinal anesthesia in geriatrics with various cardiovascular comorbidities. According to our experience, as digoxin has no negative inotropic effects, it is an attractive option for management of AF in these cases. We successfully treated several cases of elderly patients with a sudden onset of AF and serious hemodynamic instability with two doses of 0.25 mg digoxin administered with a half an hour interval during spinal anesthesia. The adverse effects and toxicity of this drug are mostly related to its long-term use and the use of a single dose during spinal anesthesia is not a concern. However, its use in spinal anesthesia has not been previously studied and further research to evaluate the safety and efficacy of digoxin in this specific patient population is needed. It should be noted that along with drug therapy, efforts also should be made to treat the underlying causes of AF such as hypoxia, hypotension, bleeding, and anxiety.

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