

Intraoperative tachycardia- reset by single shot short acting beta blocker

Opinion

Beta-adrenergic receptor blockers (β blockers) have been used for preventing or treating tachycardia, hypertensive crisis, ischemic cardiomyopathy and arrhythmias (perioperatively). Myocardial depression and bradycardia associated with β blockers is attributed to sympathetic nervous system blockade rather to membrane stabilization.¹ Surgical procedures are associated with perioperative tachycardia and increased myocardial contractility leading to an increased oxygen demand.² 2009 AHA update on β blockers states that "The usefulness of beta blockers is uncertain for patients who are undergoing either intermediate risk procedures or vascular surgery in whom preoperative assessment identifies a single clinical risk factor in the absence of coronary artery disease".³

Hypovolemia, light plane of anesthesia, hypercarbia, fever, myocardial ischemia, acute drug withdrawal can all produce intraoperative tachycardia. After exclusion of all these causes still tachycardia persists quite often, it may be due to surgical stress. We have observed that small single shot dose of short acting β blocker works effectively under such situations in patients without any risk factors. β blockers are effective for suppressing atrial premature beats and controlling heart rate and conversion of focal atrial tachycardia, as well as preventing its recurrence, in many instances the result of increased sympathetic tone⁴ such as after surgery.⁵ β blockers major adverse effects are hypotension, heart failure (contraindicated for patients class IV AHA) and bronchospasm and their use shall be withheld in such cases.

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Conflicts of interest

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