

Correspondence



Therapeutic options for cardiogenic shock

To the Editor:

The recently published report describing a case of cardiogenic shock following nasal septoplasty¹ helps to raise our awareness of the issue and suggests that beta blockade can be ineffective and, at times, harmful in that situation. Unfortunately, the authors fail to discuss other therapeutic options which may have been appropriate and should have been considered. Since, as a rule, the effects of single injections of epinephrine are transient, should the ensuing hypertension and tachycardia simply be ignored, or should definitive alpha blockade, either alone or in combination with a beta adrenergic blocking drug, be considered?

This case report also raises the question as to what are the most appropriate resuscitative measures to assume when faced with a cardiac arrest in this scenario. The problem is already postulated to be excess alpha stimulation in the presence of beta blockade; therefore, administering additional epinephrine in this case may not have been ideal. Should the use of beta stimulants (e.g., isoproterenol) to achieve a positive chronotropic effect be considered? The answers to these questions may not be straightforward; however, the authors might have considered discussing the additional treatment options.

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Reference

- 1 Schwalm JD, Hamstra J, Mulji A, Velianou JL. Cardiogenic shock following nasal septoplasty: a case report and review of the literature. *Can J Anesth* 2008; 55: 376–9.

Reply:

I would like to address the insightful questions raised by Dr. Lewis regarding our article.¹

Unfortunately, there is insufficient evidence in support of a particular therapeutic intervention to manage

the hypertensive response induced by the systemic absorption of topical epinephrine. The proposed mechanism leading to cardiogenic shock and pulmonary edema initially involves the increased systemic vascular resistance, secondary to the systemically absorbed vasoconstrictor, combined with the negative inotropic and chronotropic effects of beta-blockers (BB), or possibly calcium channel blockers (CCB). The use of BB for the treatment of the hypertensive response is thought to play a key role in the pathogenesis of cardiogenic shock and pulmonary edema. It has been proposed that no treatment be initiated.² However, if the hypertension is severe and needs treatment, an anti-hypertensive agent other than a BB or non-dihydropyridine CCB can be considered.

Unfortunately, in a few reported cases, medications such as isoproterenol, dopamine, and epinephrine have not been demonstrated to provide significant clinical benefit once the clinical presentation has progressed to cardiogenic shock and pulmonary edema.² It has been suggested that glucagon could be considered to counteract the negative inotropic effects of the BB.²

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References

- 1 Schwalm JD, Hamstra J, Mulji A, Velianou JL. Cardiogenic shock following nasal septoplasty: a case report and review of the literature. *Can J Anesth* 2008; 55: 376–9.
- 2 Groudine SB, Holliger I, Jones J, DeBouno BA. New York State guidelines on the topical use of phenylephrine in the operating room. The Phenylephrine Advisory Committee. *Anesthesiology* 2000; 92: 859–64.

Rapid estimation of distance from the tip of the tracheal tube to carina using fiberoptic bronchoscopy

To the Editor:

A tracheal tube should optimally be positioned with its tip at mid-trachea or, in an adult patient, 3–5 cm above