

## References

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## *Ventricular fibrillation in the postanesthesia care unit (PACU) secondary to coronary spasm*

To the Editor:

A 61-yr-old male patient was scheduled for open retropubic prostatectomy. Medical history consisted of arterial hypertension and ischemic cardiopathy treated medically (nitrates and diltiazem chlorhydrate). Preoperatively, the patient did not complain of chest pain and functional capacity was good. Physical examination, resting electrocardiography and usual preoperative blood tests were normal. The patient did not take his morning diltiazem, arriving to the operating room 36 hr after his last dose. Induction of anesthesia was achieved by *iv* propofol, sufentanil, and rocuronium. Maintenance of anesthesia was with inhaled sevoflurane (1–2% end-tidal) and *iv* boluses of sufentanil and rocuronium as needed. Surgery was uneventful. On PACU arrival, the patient was fully awake, responsive and free of pain. Systemic blood pressure was 118/66 mmHg, heart rate 62 beats·min<sup>-1</sup>, and pulse oximetry 99%. A few minutes later, the patient developed ventricular fibrillation (VF). He was resuscitated as per the Adult Advanced Cardiac Life Support algorithm.<sup>1</sup> During the next hour, episodes of VF occurred inducing hemodynamic instability. The 12-lead electrocardiogram recorded during normal sinus rhythm showed diffuse and massive ST-segment elevation. Cardiac catheterization was decided. During the transfer, he developed electromechanical dissociation and despite adequate resuscitation, the patient remained 30 min without a detectable pulse. After a last 1 mg administration of epinephrine, the heart rate normalized. The coronary angiogram showed a severe, diffuse coronary spasm, leading to the diagnosis of variant angina. Intracoronary nitroglycerin immediately relieved the spasm, uncovering a normal coronary anatomy. The patient made a rapid recovery.

This case is illustrative of possible causes of VF in the PACU: coronary spasm due to undiagnosed variant angina or acute withdrawal of calcium-channel blockers.

This makes the preoperative interview and maintenance of usual medications crucial. A clear diagnosis is sometimes difficult during resuscitation. Epinephrine can induce a vicious circle making further therapeutic decisions difficult,<sup>2</sup> while nitrates or calcium-channel blockers are not always easy, straightforward, therapeutic choices during persistent VF.

The diagnosis of variant angina is not always easy to make preoperatively.<sup>3,4</sup> This condition is probably under diagnosed in the surgical population. A patient with an unclear coronary history developing VF in the perioperative period must undergo rapid coronary angiography to make the difference between "classic" atheromatous coronary disease and variant angina. Moreover it allows specific treatment: coronary angioplasty with or without stenting or intracoronary nitrate injection.

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