Intracoronary Adenosine Administration in the Right Coronary Artery

A Word of Caution

The study by De Luca et al. (1) elegantly demonstrates that increasing doses of intracoronary adenosine are associated with incremental reductions in fractional flow reserve. We would like to caution, however, against high-dose intracoronary adenosine administration in the right coronary artery. Although none of the 12 patients who underwent right coronary artery evaluation in the present study had a clinical event, 3 of them developed complete atrioventricular block lasting $\geq 4$ s. Prolonged complete atrioventricular block can lead to ventricular fibrillation or atrial fibrillation (2), both important complications that may require emergent defibrillation. Hence, intravenous administration may be the preferred route for vasodilator administration for fractional flow reserve measurement in the right coronary artery.

*Emmanouil S. Brilakis, MD, PhD
Subhash Banerjee, MD

*Division of Cardiology (111A)
VA North Texas Health Care System
The University of Texas Southwestern Medical Center at Dallas
4500 South Lancaster Road
Dallas, Texas 75216
E-mail: esbrilak@yahoo.com

doi:10.1016/j.jcin.2011.11.008

Please note: Dr. Brilakis received speaker honoraria from St. Jude Medical and Terumo; research support from Abbott Vascular and InfraRedx; and his spouse is an employee of Medtronic. Dr. Banerjee received speaker honoraria from St. Jude Medical, Medtronic, and Johnson & Johnson; and received research support from Boston Scientific and The Medicines Company.

REFERENCES


Reply

We would like to thank Drs. Brilakis and Banerjee for their interest in our study (1). In our extensive experience (1,2), we have never had any relevant complications, especially atrial or ventricular fibrillation, with adenosine administration in the right coronary artery. This is consistent with data shown by other authors (3).

As stated in our paper (1), we had to stop the protocol in 4 patients due to atrioventricular block that technically hampered the evaluation of fractional flow reserve. Therefore, we believe that it is not worthwhile to increase the dose of adenosine in the evaluation of fractional flow reserve when there is already a relevant atrioventricular block with a low dose.

*Giuseppe De Luca, MD, PhD
Luca Venegoni, MD
Sergio Iorio, MD
Livio Giuliani, MD
Paolo Marino, MD

*Department of Cardiology
Eastern Piedmont University
Corso Mazzini 18
Novara 28100
Italy
E-mail: giuseppe.deleuca@maggioreosp.novara.it


REFERENCES

