

Letters to the Editor

The Association Between Stent Postdilation and Death in Patients With Acute Coronary Syndrome



To the Editor:

A recent study by Haddad et al. showed that the predilation-sizing-postdilation technique was associated with a lower risk of major adverse cardiac events in patients with acute coronary syndromes (ACS).¹ The major adverse cardiac events-free survival rate up to 4 years was significantly higher in patients who underwent predilation-sizing-postdilation than those who did not (95.8% vs 74.0%; $P = 0.001$). The results are at odds with findings from several studies including the National Heart, Lung, and Blood Institute Dynamic Registry² and the BASE ACS trial (ClinicalTrials.gov registration number NCT00819923),³ which showed a higher risk of death or repeat myocardial infarction (MI) with postdilation in the settings of acute myocardial infarction (AMI) and ACS.

In their study, the primary end point was the composite of cardiac death, nonfatal myocardial infarction, and clinically driven target vessel revascularization up to 4 years of follow-up.¹ Using such a composite end point makes it impossible to distinguish its effect on safety from effectiveness. The multi-centre National Heart, Lung, and Blood Institute Dynamic Registry analyzed the association between stent postdilation and the composite end point of death and MI among 1358 AMI patients and 3001 non-AMI patients separately.² The results showed that stent postdilation was associated with a significantly higher risk of death or MI (hazard ratio, 1.78; 95% confidence interval [CI], 1.12-2.83; $P = 0.01$) in patients who presented with AMI but not in non-AMI patients (hazard ratio, 1.08; 95% CI, 0.77-1.50; $P = 0.67$). On the basis of a post hoc analysis of the BASE ACS trial, the rate of death (including cardiac and noncardiac death) was significantly higher in the postdilation group than in the non-postdilation group (odds ratio, 1.72; 95% CI, 1.02-2.88; $P = 0.04$).³

The molecular evidence suggests a detrimental effect of stent postdilation in ACS patients. One recent study showed a

significantly increased level of plasma B-type natriuretic peptide, a biomarker for heart failure, and troponin I, a biomarker of myocardial injury, after stent postdilation.⁴

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Disclosures

The authors have no conflicts of interest to disclose.

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