INTERVENTIONAL CARDIOLOGY

PROPHYLACTIC IABPS NOT NEEDED IN PCI

Intra-aortic balloon counterpulsation pumps (IABPs) are efficacious in treating cardiogenic shock and are often inserted prophylactically in hemodynamically stable patients who are undergoing high-risk percutaneous coronary intervention (PCI). However, in contrast to previous findings from several retrospective observational studies, a randomized controlled trial has now demonstrated that prophylactic insertion of IABPs during high-risk PCI is not associated with a reduction in the incidence of major adverse cardiac and cardiovascular events (MACCE).

Patients with multivessel coronary disease and impaired left ventricular function were enrolled in the Balloon Pump-Assisted Coronary Interventions Study (BCIS-1) at 17 UK centers between December 2005 and January 2009. Of the 301 patients enrolled in the trial, 151 were randomly assigned to undergo IABP insertion during PCI and the remaining 150 assigned to PCI with no planned IABP use. Rescue IABP insertion occurred in 18 (12%) of the patients not assigned to receive a prophylactic IABP.

The primary end point of the study, MACCE, was defined as death, acute myocardial infarction, cerebrovascular event, or further revascularization before hospital discharge (capped at 28 days). Incidence of MACCE was not different between the two intervention groups (15.2% for IABP vs 16.0% for no planned IABP, $P=0.85$). Furthermore, no statistical differences were observed between the two groups when stratified according to kidney function, diabetes status, coronary anatomy, and glycoprotein IIb/IIIa inhibitor use.

Whilst their study does not support the routine use of prophylactic IABP insertion during PCI, the authors believe that the number of patients who required rescue IABPs highlights the importance of a standby IABP strategy in this setting.

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Original article Perera, D. *et al*. Elective intra-aortic balloon counterpulsation during high-risk percutaneous coronary intervention: a randomized controlled trial. *JAMA* **304**, 867–874 (2010)