Table 2. Relationship Between Change in DAPT Status and Death

	No. of Eligible Participants	No. of Changes in Medication	No. of Events (%)	Event Rate per 100 Person-Years at Risk
During time on DAPT	8593	—	517 (85)	4.6
After DAPT change (any time)	3608	4041	92 (15)	2.7
< 7 d after stop	3608	4041	3	3.9
7 to 30 d after stop	3580	4004	6	2.4
> 30 d after stop	3467	3865	83	2.7

DAPT, dual-antiplatelet therapy.

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Mixed Results With iNO During PCI

Written by Mary Beth Nierengarten

Inhaled nitric oxide (iNO) delivered to patients before and during percutaneous coronary intervention (PCI) for treatment of myocardial infarction (MI) does not reduce infarct size but may enhance functional recovery in patients who also receive intracoronary or intravenous nitroglycerin (NTG).

Stefan P. Janssens, MD, University Hospital Gasthuisberg of Leuven, Leuven, Belgium, presented results of the Effects of Nitric Oxide for Inhalation in Myocardial Infarction Size trial [NCT01398384]—a double-blind, placebo-controlled, parallel-group study to test the hypothesis that iNO reduces infarct size and adverse left ventricular (LV) remodeling and improves LV functional recovery in patients with STEMI who have undergone PCI. The phase 2 multicenter study included 248 patients with STEMI who presented between 2 and 12 hours after symptom onset and were randomized to a group that received supplemental oxygen with iNO at a concentration of 80 parts per million (n = 126) or to a control group of no iNO (n = 122).

All patients included in the study were older than 18 years, with no congestive heart failure and with normal oxygen saturation. Patients were excluded from the study if they had a prior MI, coronary artery bypass grafting, prior PCI, left bundle branch block, contraindication to cardiac magnetic resonance, active or recent hemorrhage, or pulmonary disease needing oxygen.

The primary end point of the study was infarct size (percentage LV mass) at 48 to 72 hours after PCI, as assessed by cardiac magnetic resonance imaging. There was no difference in the relative infarct size between patients treated with iNO and the control group (18.0% vs 19.4%; $P = .44$).

In a prespecified subgroup analysis of patients who also received NTG during PCI, NTG-naïve patients who received iNO had a significant reduction in infarct size as compared with controls (17.0% vs 22.4%; $P = .044$). However, in patients who had previously received NTG, infarct size increased during PCI when compared with that of controls (19.3% vs 15.1%; $P = .059$). Secondary end points of the study included cardiovascular magnetic resonance–based outcomes, including infarct size as percentage area at risk at 48 to 72 hours, incidence of myocardial hemorrhage at 48 to 72 hours, global LV function at 48 to 72 hours and at 4 months, and changes in remodeling at 4 months.

A trend toward greater myocardial salvage index and enhanced functional recovery was found in patients who received iNO. Furthermore, at 4 months, the early benefit of this trend toward functional recovery was enhanced, as was adverse LV remodeling. An additional secondary end point examining a clinical composite outcome of death, recurrent MI or ischemia requiring rehospitalization or revascularization, and stroke also showed a promising trend in the benefit of iNO.

Prof Janssens concluded his presentation by emphasizing that the preliminary results of this trial need independent corroboration in future studies.

Early Ticagrelor Improves ST Segment Resolution After PCI

Written by Mary Beth Nierengarten

For patients with ongoing STEMI, prehospital administration of ticagrelor approximately 45 to 60 minutes prior to undergoing percutaneous coronary intervention (PCI) improves ST elevation segment resolution after PCI without increasing bleeding.