Nature Reviews Cardiology | Published online 14 Sep 2017

IN BRIEF

ANTICOAGULATION THERAPY

Bivalirudin not superior to heparin in PCI

Anticoagulation with bivalirudin during percutaneous coronary intervention (PCI) for ST-segment elevation myocardial infarction (STEMI) or non-STEMI is associated with similar rates of adverse outcomes to the use of heparin. In the registry-based, open-label VALIDATE-SWEDEHEART trial, 3,005 patients with STEMI and 3,001 patients with non-STEMI were randomly assigned to bivalirudin or heparin during PCI (predominantly radial access). Patients also received a potent $P2Y_{12}$ inhibitor and were not intended to receive a glycoprotein IIb/IIIa inhibitor. After 180 days, the primary end point (all-cause mortality, myocardial infarction, or major bleeding) occurred in 12.3% and 12.8% of the bivalirudin and heparin groups, respectively. "Even after VALIDATE-SWEDEHEART, there is no definitive answer to the question of whether to use bivalirudin or heparin during PCI," comments Gregg Stone in an editorial accompanying the trial report, but forthcoming meta-analyses are designed to resolve this question.

ORIGINAL ARTICLE Erlinge, D. *et al.* Bivalirudin versus heparin monotherapy in myocardial infarction. *N. Engl. J. Med.* http://dx.doi.org/10.1056/NEJMoa1706443 (2017)

ACUTE CORONARY SYNDROMES

Supplemental oxygen in myocardial infarction

The use of supplemental oxygen does not improve outcomes in patients with myocardial infarction without hypoxaemia, according to results of the registry-based DETO2X-SWEDEHEART trial. A total of 6,629 patients with suspected myocardial infarction and oxygen saturation ≥90% were randomly allocated to supplemental oxygen (6 l/min for 6–12 h, delivered through an open face mask) or ambient air. Hypoxaemia developed in 1.9% of the oxygen group compared with 7.7% of the ambient-air group. No significant differences were observed in the 1-year rate of all-cause death (5.0% vs 5.1%) or rehospitalization with myocardial infarction (3.8% vs 3.3%). "Supplemental oxygen provides no benefit to patients with acute coronary syndromes who do not have hypoxaemia," summarizes Joseph Loscalzo in an editorial. "It is clearly time for clinical practice to change to reflect this definitive evidence."

ORIGINAL ARTICLE Hofmann, R. *et al.* Oxygen therapy in suspected acute myocardial infarction. *N. Engl. J. Med.* http://dx.doi.org/10.1056/NEJMoa1706222 (2017)

VASCULAR DISEASE

Benefits of population screening for vascular risk

Population screening for peripheral artery disease (PAD) and hypertension, in addition to established screening for abdominal aortic aneurysm (AAA), can reduce the risk of death, according to data from the VIVA study. A total of 50,156 men aged 65–74 years in the Central Denmark region were randomly assigned to screening for AAA, hypertension, and PAD or to no screening. Individuals found to have AAA or PAD were initiated on appropriate therapy; participants with suspected hypertension were referred to their general practitioner. After follow-up (median 4.4 years), all-cause mortality was 10.2% in the screening group and 10.8% in the nonscreening group (HR 0.93, 95% CI 0.88–0.98, $P = 0.01$). In an accompanying editorial, Chadi Ayoub and Hassan Murad find the results "thought-provoking", but note that various criteria must be fulfilled before deciding "whether screening should be implemented or scarce resources should be directed at individuals with increased risk".

ORIGINAL ARTICLE Lindholt, S. & Søgaard, R. Population screening and intervention for vascular disease in Danish men (VIVA): a randomised controlled trial. *Lancet* http://dx.doi.org/10.1016/S0140-6736(17)32250-X (2017)

© 2017 Macmillan Publishers Limited, part of Springer Nature. All rights reserved.