In brief

BNP as a biomarker study

A new study has suggested that using N-terminal brain natriuretic peptide (BNP) as a marker to guide therapy in the treatment of heart failure, is not associated with any improvement in all-cause outcome over conventional symptom-guided therapy (*JAMA* 2009;**301**:383–92).

The study (Trial of Intensified *vs*. Standard Medical Therapy in Elderly Patients With Congestive Heart Failure [TIME-CHF]) was performed in 499 patients age 60 years or older hospitalised for heart failure within the past year and with N-terminal BNP levels at least twice the upper limit of normal. The subjects were randomised to receive treatment to reduce symptoms (symptom-guided therapy) or intensive treatment to reach a BNP level of no more than twice the upper limit of normal and reduce symptoms (BNP–guided therapy). The study population was then prospectively stratified into two age groups, under and over 75 years.

After a follow-up of 18 months, the BNP-guided strategy and symptom-guided strategies had similar outcomes with respect to all-cause hospitalisation (41% *vs*. 40%) and survival. However, survival without hospitalisation for heart failure was significantly improved with BNP–guided therapy (72% *vs*. 62%). This benefit was not apparent in patients over the age of 75.

Blood flow measurement improves stent efficacy

Results from a recent study show that the most effective way of locating a stent in patients with multi-vessel disease is to use a new technique of fractional flow reserve (FFR) over conventional angiography.

In the FFR technique, a tiny wire with a sensor is threaded through the coronary artery to the point of occlusion and blood flow is measured to determine whether the lesion is causing ischaemia.

The FAME study (*N Engl J Med* 2009; **360**:213–24) was carried out in 20 centres in Europe and the US on more than 1,000 patients with multi-vessel disease who were randomised to either conventional angiography or FFR. Results showed that one-third fewer stents were used in the FFR group and the difference in composite outcome at one year was significant: the FFR group showed a 28% lower incidence of major adverse cardiac events (repeat angioplasty, heart attack or death) compared to the angiography group.

Constant compressions critical to CPR

Interrupting chest compressions during resuscitation reduces the chances of heartbeat return after defibrillation. New Norwegian research shows that for every second of a pause in compressions, there is a 1% reduction in the likelihood of success (*BMC Medicine* February 2009).

The American Heart Association's first aid guidelines were updated last year, suggesting that the 'mouth-to-mouth' component of CPR was unnecessary. This new research supports this position, in that the pause in compressions required to perform artificial respiration may reduce the patient's chances of recovering their heartbeat.

Prasugrel shows benefit in STEMI patients undergoing PCI

Results from a pre-specified analysis of the TRITON-TIMI 38 study showed that patients with ST-elevation myocardial infarction (STEMI) undergoing percutaneous coronary intervention (PCI) achieved a significant reduction in the relative risk of the combined end point of cardiovascular events (cardiovascular death, non-fatal myocardial infarction [MI] or non-fatal stroke) at both 30 days and 15 months when treated with prasugrel compared with clopidogrel. (*Lancet* 2009;**373**: 723–31).

The study was carried out in 707 centres in 30 countries on 3,534 patients who were either randomised to prasugrel (60 mg loading dose, 10 mg maintenance dose) or clopidogrel (300 mg loading dose, 75 mg maintenance dose). At day 30, prasugrel patients showed a 32% reduction in cardiovascular events compared to patients treated with clopidogrel. This effect continued for up to 15 months (21% reduction).

Although the overall study population, which included patients with unstable angina, NSTEMI and STEMI, showed a significant increase in TIMI major bleeding for patients on prasugrel, in the STEMI subpopulation, there was no significant increase of non-CABG (coronary artery bypass grafting) related TIMI major or minor bleeding during the trial period.

Correction

The editors would like to apologise for the typographical error which led to Otner's Syndrome (*Br J Cardiol* 2009;**16**:47), a rare cardiovcoal syndrome, being mis-spelt as Ortner's Syndrome.