In brief

Multiple drug therapy use with bosentan as first-line therapy

Patients with pulmonary arterial hypertension (PAH) who receive an additional 20 or 40 mg tadalafil to their first-line bosentan therapy demonstrated a trend towards a positive 23 m improvement during the six-minute walk distance (6MWD) test, a measure of symptom severity and functioning, according to the PHIRST study data presented at the 2009 American Thoracic Society (ATS) conference.

The findings are consistent with previous data investigating the impact of multiple drug therapy on symptoms, functioning and outcomes. Bosentan is the most widely studied PAH therapy with the addition of combination therapies including PDE5 inhibitors and inhaled, intravenous or oral prostacyclins.

Rapid MI diagnosis within six hours

A new multi marker cardiac biochip array has been launched which can provide a rapid diagnosis of myocardial infarction (MI) and identification of at risk acute coronary syndrome (ACS) patients. The array tests four cardiac biomarkers using a single patient sample, reliable within the critical three to six hour post pain onset treatment window.

The Randox Cardiac Array combines the gold standard troponin test with CK-MB, myoglobin and heart fatty acid binding protein (h-FABP). The latter has been show to be a powerful identifier of high-risk MI patients independently of troponins. Randox claims its multi-analyte test provides greater diagnostic performance, with 20% increased sensitivity compared to testing troponin alone and a 98% rule out for MI within three to six hours of pain onset. As a result, it says, cardiac patients requiring intervention are given immediate priority and non-MI patients can be quickly and effectively managed, freeing up hospital resources.

MSc in Preventive Cardiology at Imperial College London

Applications are being invited for the next intake into the Masters Degree course in Preventive Cardiology which commences this October at Imperial College London. The course is open to hospital and primary care physicians, nurses, dietitians, physiotherapists, physical activity specialists, psychologists, occupational therapists, pharmacists and any other health professionals with an interest in cardiovascular disease prevention. Full-time (one year) or part-time (two years) students are welcome. Students also have the option of completing stand-alone modules as short courses.

For more enquiries and application details, visit; http://www1.imperial.ac.uk/medicine/teaching/postgraduate/taughtcourses/preventivecardiology

World's first wearable cardiac defibrillator

The new 'Lifevest' (pictured right) can be worn by people who are at risk of having a sudden cardiac arrest (SCA) and are recovering from a heart attack or who are on waiting lists for surgery. Worn next to the skin, like an ordinary vest, it can monitor, detect and shock people having a heart attack. Its manufacturer, the US company Soll/Lifecor, says it can promote a sense of security in patients and also a reduced hospital stay before surgery. It has a 98% first shock success rate for treating patients for sudden cardiac arrest and has been worn by over 12,000 patients and is listed alongside implantable defibrillators in ACC/AHA/ESC guidelines for prevention of sudden cardiac death. It is being supplied in the UK by Dot Medical.

Fish protein link to controlling high blood pressure

The Goby fish may be able to provide answers to tackling hereditary high blood pressure and kidney disease by helping researchers to locate the genes responsible for hypertension. Urotensin II, first identified in the Goby fish, is important for regulating blood pressure in all vertebrates, including humans.

"The protein found in the fish has remained almost unaltered during evolution," says Dr Radoslaw Debiec (Department of Cardiovascular Sciences, University of Leicester). "This indicates that the protein might be of critical importance in regulation of blood pressure and understanding the genetic background of high blood pressure."

"Analysis of a large cohort of families has provided us with evidence that genetic information encrypted in the protein travels together with the risk of high blood pressure across generations. Furthermore, the same genetic variant responsible for elevated blood pressure is responsible for the development of chronic kidney disease in this group of patients."