GLOSSARY

METABOLIC SYNDROME

A collection of metabolic disorders that increase the risk of developing diabetes, heart disease or stroke; risk factors include high central obesity, high blood pressure and high insulin levels

NCEP

National Cholesterol Education Program

DUKE CRITERIA

A set of criteria used for the diagnosis of infective endocarditis, taking into account positive blood culture, evidence of endocardial involvement, and other factors

reduction following PTSMA is biphasic and more gradual. Mitral-valve defects are frequently associated with HCOM and can be corrected using a technique called mitral-leaflet extension (MLE). Sustained hemodynamic improvements have been reported in patients treated using a combination of MLE and septal myectomy.

In this study, van der Lee *et al.* compared 1 year outcomes of patients with HCOM and an enlarged mitral-valve leaflet, following either PTSMA with MLE (43 patients) or surgical myectomy with MLE (29 patients). At 1 year follow-up, there were no significant differences in LVOT between the treatment arms. Periprocedural complications and reinterventions were, however, more frequent in patients who underwent PTSMA. Further studies will help establish longer-term outcomes for these patients.

Claire Braybrook

Original article van der Lee C *et al.* (2005) Percutaneous versus surgical treatment for patients with hypertrophic obstructive cardiomyopathy and enlarged anterior mitral valve leaflets. *Circulation* 112: 482–488

Link between insulin resistance, ethnicity and endothelial dysfunction

According to a recent study, insulin resistance and systolic blood pressure are the main causes of endothelial dysfunction (ED) in the METABOLIC SYNDROME (MS). Furthermore, the importance of these factors is affected by ethnic origin.

Insulin resistance is strongly linked to ED, which itself is linked to obesity and the metabolic syndrome. Few data exist, however, on the interrelationship between these components, or on how this relationship differs between ethnic groups. Lteif *et al.* assessed the effect of fasting glucose levels, waist circumference, blood pressure, triglycerides and HDL cholesterol on endothelial function (EF), measured according to the NCEP Adult Treatment Panel III cut-off values, in 42 white and 55 black nondiabetic volunteers. Participants with at least three of these components were deemed to have the MS.

In black volunteers, multivariate analysis showed EF to independently relate only to systolic blood pressure. In white volunteers, insulin resistance was the only determinant for ED. Blacks had reduced EF compared with whites; EF was much worse in both groups

when the MS was present than when it was absent ($P=0.007$).

The authors conclude that insulin resistance should be included, along with blood pressure and other recognized metabolic factors, in the assessment of cardiovascular risk associated with obesity and the MS. The results suggest that treatment of ED should be altered according to ethnic group, but further ethnicity-based studies are necessary.

Pippa Murdie

Original article Lteif AA *et al.* (2005) Obesity, insulin resistance, and the metabolic syndrome: determinants of endothelial dysfunction in whites and blacks. *Circulation* 112: 32–38

Vegetation length predicts new embolic events and mortality in infective endocarditis

A European study has shown that vegetation length is a strong predictor of embolism and mortality after initiation of antibiotics in patients with infective endocarditis (IE). In combination with clinical and microbiological findings, echocardiography might identify patients who require more aggressive surgical treatment.

IE patients are at high risk of embolic events and death, but conflicting data regarding the predictors of these events, as well as disagreement over how echocardiography should be used in the stratification of risk, make treatment decisions difficult. This multicenter, prospective, blind study looked for potential predictors of embolic events and 1-year mortality in 384 consecutive patients with definite IE as defined by the DUKE CRITERIA.

By multivariate analysis, *Staphylococcus aureus* and *Streptococcus bovis* bacteria were found to be the only predictors for embolism before or after diagnosis of IE, whereas vegetation length >10mm and severe vegetation mobility (vegetation that crosses the leaflets' line of coaptation during the cardiac cycle) were independent predictors of embolism after initiation of antibiotics. Vegetation length >15mm was an independent predictor of 1-year mortality. Vegetations were identified in 320 patients by transesophageal echocardiography, compared with only 192 patients by transthoracic echocardiography, showing the former to be more effective in identifying high-risk patients.