

New advances in percutaneous treatment of aortic and mitral valve

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Valvular heart disease is an important cause of cardiovascular morbidity and mortality worldwide. In many countries, though improved living conditions and better access to antibiotics and healthcare have seen a decline in rheumatic heart disease, the prevalence of degenerative valve disease has escalated with ageing of the population. In addition, the number of long-term survivors of surgery for congenital cardiac malformations is growing, with these patients frequently affected by valve dysfunction in later life.

Mitral valve disease affects more than 4 million people in the United States. The gold standard of treatment in these patients is surgical repair or replacement of the valve with a prosthesis. The MitraClip (Abbott Vascular, Menlo Park, CA) is a new technology, which offers an alternative to open surgical repair or replacement via a minimally invasive route.

Aortic valve replacement (AVR) is the second most common cardiac procedure, and aortic stenosis (AS) is the most common valve disease. Population ageing is affecting many countries and is seen as the main driver for the increased incidence of AS in the Western world. AVR is indicated in symptomatic patients with severe stenosis (mean pressure gradient of at least 40 mmHg or maximum velocity of at least 4 m/s) or in asymptomatic patients with impaired left ventricular ejection fraction or low surgical risk. Until recently, standard AVR (SAVR) was the only curative treatment available and formed the backbone of management for most patients. With the recent publication of the Cavalier trial of a sutureless aortic valve and the Placement of Aortic Transcatheter Valve (PARTNER) 2 randomised controlled trial, an updated review of AVR is warranted.