CARDIAC PHYSIOLOGIST LED AORTIC STENOSIS SURVEILLANCE CLINIC

Catherine Templeton and Cardiologists at RGH
Background

- Aortic stenosis is the commonest form of valvular heart disease in the UK

- Asymptomatic patients with mild AS make up a significant proportion of patients followed up in the general cardiology clinics
Epidemiology

- Aortic ‘sclerosis’ is present in about 25% of adults over the age of 65 years.
- Progression to severe aortic stenosis within 7 years in 16% of patients of patients


**Prevalance of aortic valve abnormalities in the elderly-an echocardiographic study of a random population sample**

- Number of patients-560
- Mild calcification found in 222(40%)
- Severe calcification found in 72(13%)
- Critical native aortic valve disease in 12(2.2%)

**CONCLUSION:** Calcific aortic valve stenosis constitutes a significant health problem

*J Am Coll Cardiol.1993 Apr;21(5):1220-5*
Why monitor AS?

• The *rate of progression* from mild to severe AS varies between patients and regular echocardiographic assessment is essential in this group of patients.

• The average increase in mean gradient is 7 mm Hg per year.

• The mean decrease in valve area ranges from 0.02 cm² per year in ‘slow progressors’ to 0.3 cm² per year in ‘fast progressors’.
Establishing an ‘ASSC’

• AS surveillance clinic established in May 2003 (JRD’s idea - no known model available)
  - to reduce the burden of follow-up patients in general cardiology clinics
  - to standardise the echocardiographic assessment of patients with mild AS
Practicalities

Initial assessment by a cardiologist.
Baseline transthoracic echocardiogram.
Letter to GP that patient enrolled into ASSC.

ENTRY CRITERIA:
• Asymptomatic
• Peak aortic valve gradient (AVG) of less than 50 mmHg
• Normal internal left ventricular dimensions and systolic function
Echocardiographic Assessment by BSE Accredited Cardiac Physiologist/Sonographer

- Peak AVG (2 or more views)
- Traced mean gradient
- LV dimensions and systolic function
- AVA by continuity equation (and planimetry when possible)
- No symptomatic assessment but patients reminded to inform GP of any new cardiac symptoms
Outcomes / progress so far....

• 180 patients (age range of 25 and 84 years).
• First 100 patients reported at BSE 2005¹ (BSE 2005): average peak AVG 38.9mmHg (± SD19.1), average AV area (derived by continuity equation) of 1.29cm² (± SD 0.46).
• 12 patients referred back to their cardiologist due to worsening echocardiographic parameters (AVG >50mmHg)
• 2 cases of coarctation diagnosed
• 2 patients found to have normal aortic valves with small LVOT gradients
• 3 valve replacements
• 2 unrelated deaths
• No complaints....

¹. Heart 2005;92 :i40
The establishment of an AV surveillance clinic has led to a reduction in number of patients requiring follow-up by a cardiologist whilst also standardising the echocardiographic assessment.

We believe that this system is more clinically efficient and is also likely to be cost-effective.

The clinic highlights the important potential clinical role of a Consultant Sonographer.
Diolch…
Thank you…