Investigation

Echocardiogram is the main diagnostic method.

Bloods

- FBC, U&E, cholesterol, clotting.

ECG

- May see: left ventricular hypertrophy
  - Deep S-waves in V1 and V2
  - Tall R waves in V5 and V6
- Left ventricular strain may be seen in severe disease.

CXR

- Typically shows: small heart, dilated ascending aorta
- Cardiomegaly occurs if HF develops.

Echocardiogram

- Assess valve area, ejection fraction, ventricular hypertrophy
- Classified by severity on echo according to its transaortic pressure gradient and valve area

Other Tests

- Cardiac MRI
- Cardiac catheterisation
- ECG exercise stress testing → in asymptomatic patients
  - Positive test = onset of symptoms, ECG changes, abnormal BP response.

Management

The definitive management of aortic stenosis is by surgical repair or replacement.

Valvotomy

- Stenotic valve leaflets are forced apart
- May be: percutaneous balloon valvotomy or open valvotomy.

Valve Replacement

- Mechanical valve → long term anticoagulation, long lifespan, suited to younger patients
- Bioprosthetic valve → no anticoagulation, limited life span (10 years), suited to older patients.
