Transposition of the Great Arteries (TGA)

What is it?

- The aorta and pulmonary artery are the wrong way around/transposed..
- Older patents likely to have had an atrial switch, either a Mustard or Senning procedure, whereby baffles (channels) are made to divert blood to correct place.
- Younger adults most probably have had an arterial switch operation, whereby the aortic and pulmonary artery are switched and connected to correct ventricles.

How is it diagnosed?

- Echocardiogram, cardiac MRI and CT.
- Cardiac Catheterisation.

How does it affect the heart?

- Atrial switch patients have a variety of issues affecting the heart:
    - Dysfunction of RV is common.
    - Tricuspid regurgitation often develops as a sign of RV dilation.
    - Tachyarrythmias.
    - Atrial flutter is common and supraventricular arrhythmias can occur.
    - With longer follow-up ongoing loss of sinus node function.
    - Multiple issues can occur with baffles (surgically introduced tunnels between atria).
- Younger patients having had arterial switch are likely to be asymptomatic but can develop LV dysfunction, arrhythmias, aortic regurgitation, pulmonary stenosis. Chest pain can occur if there has been a problem where the coronary arteries were re-implanted.

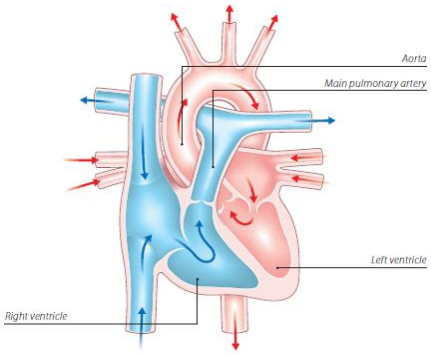
What is the long term management?

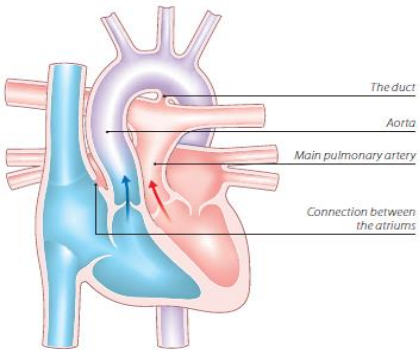
- May need valve replacement for, stenting for baffle stenosis or leaks, surgical treatment of aortic stenosis or pulmonary venous obstruction or tricuspid regurgitation
- Stenting considered for asymptomatic patients with baffle stenosis or leaks.
- Arterial switch patients less likely to need intervention; however, could require stenting for coronary artery stenosis or surgical repair for right ventricular outflow tract obstruction.
- Exercise and pregnancy have various risks; all patients should be counselled on individually.

What is the follow up?

- All patients should have an ACHD follow-up annually.
- Lifelong follow-up is required and additional interventions may to be required.

Normal Heart





TGA Heart

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The European Society of Cardiology (2012) *Guidelines for the Management of Grown-Up Congenital Heart Disease.* Oxford University Press: Oxford. Images with permission www.bhf.org