The Leeds Teaching Hospitals NHS Trust

Coarctation of the Aorta in children

Information for parents and carers

leeds children's hospital

caring about children

This leaflet provides information for parents and carers about coarctation of the aorta in children and the management and treatment of this condition.

Coarctation of the aorta

This is a serious heart condition in which there is a narrowing in the main artery (the aorta) which comes off the heart to feed the body with blood.

The narrowing usually occurs just after the aorta has given off branches to supply the head and arms with blood, preventing normal circulation to the lower half of the body. In some children the coarctation is not apparent early in life but gradually develops over time (sometimes weeks, sometimes years).

The narrowing in the aorta makes it harder for the heart to pump and causes high blood pressure in the blood vessels in the head and the arms, so the muscle of the left sided pumping chamber (the left ventricle) becomes thickened and if the coarctation is not treated heart failure, stroke or death may eventually occur.

Image of a normal heart

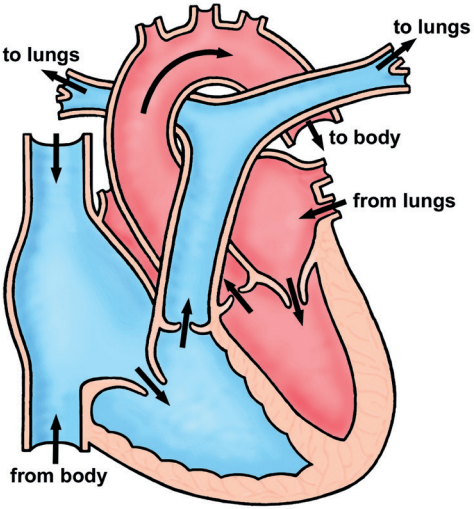
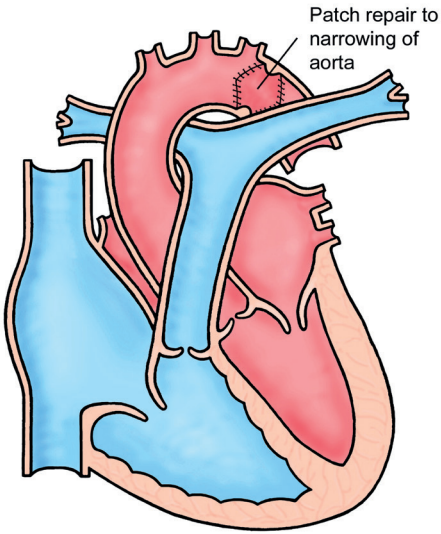


Image of a heart with Coarctation of the Aorta following repair



Here's a video explaining about Coarctation

Coarctation of the Aorta - YouTube

https://www.youtube.com/watch?v=b-a1JjFRDAI

Here's a video about the treatment of Coarctation

Coarctation of the Aorta - Treatment - YouTube

https://www.youtube.com/watch?v=Tv9H2FqbtQI

Tests

Initially simple tests such as an ultrasound scan of the heart (an "echocardiogram"), and an x-ray of the chest are required. Sometimes a CT scan is required.

Treatment

Some babies are suspected to have coarctation before they are born and some become unwell in the first month of life as the ductus arteriosus closes (this is a connection between the 2 main blood vessels coming from the heart and can bypass the narrowing). In these cases, a medication called Dinoprostone can be commenced to open the duct and stabilise the baby whilst they wait for surgery.

Treatment is necessary to repair the coarctation. The narrowing can be repaired surgically (cutting out the narrowing and sewing the ends back together or using a patch of material to enlarge the narrowing).

Some older children are suitable for "keyhole" treatment where the narrowing is stretched open with a balloon passed up from the artery at the top of the leg, or the narrowing is propped open using an expandable metal mesh tube (a stent) inserted from the artery at the top of the leg.

If your child requires either of these procedures the surgeon or cardiologist will discuss this in clinic including the risks and potential complications.

Other abnormalities

Some children with coarctation will have other heart abnormalities such as a hole between the main pumping chambers or a narrow heart valve. If present, these other abnormalities sometimes don't need treatment early on in life but need to be watched as the child grows.

Sometimes further surgery may be needed for such abnormalities later. Some patients with coarctation also have a chromosome abnormality. Tests for these are often performed routinely, particularly if the child has more than one suspected abnormality. It can take some weeks to get the results of these tests.

Follow up after operation

When repair has been necessary during childhood sometimes the narrowing in the aorta can recur as time goes by, sometimes needing further treatment. Even many years after treatment it is possible to develop a weakness in the wall of the aorta (called an aneurysm), which can be serious and can also require further surgery. Even after a good result from treatment high blood pressure is common in later life. For all these reasons lifelong follow up is necessary.

Endocarditis

There is a small risk of infection occurring in the aorta or on one of the heart valves (called endocarditis). This can happen even years after the operation and can be caused by infection of the teeth or gums. It is very important to have good dental care and visit the dentist regularly (every 6-12 months). Infection can occur with ear and body piercing and tattooing and can sometimes lead to endocarditis, so these procedures are best avoided.

For more information about endocarditis please see the link below:

Infective endocarditis … what to do to avoid it - Leeds Teaching Hospitals NHS Trust (leedsth.nhs.uk)

https://www.leedsth.nhs.uk/patients/resources/infective-endocarditis-what-to-do-to-avoid-it/

Contact us

Please contact the Paediatric Cardiac Nurse Specialists on:

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What did you think of your care?

Scan the QR code or visit **bit.ly/nhsleedsfft**

Your views matter

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