

Cardiothoracic Surgery

Aortic valve reconstruction

Introduction

By the time you receive this leaflet, your heart doctor will have mentioned that your aortic valve (main outlet valve from heart) is not working properly and it needs an operation. There are different types of interventions that can be used to improve blood flow across the valve. These include aortic valve repair, replacement with an artificial or tissue valve, Ross procedure (replacing your diseased aortic valve with the valve controlling blood flow to your lungs) or aortic valve reconstruction.

What is aortic valve reconstruction?

An aortic valve reconstruction is a type of open heart surgery used for certain kinds of aortic valve disease. An aortic valve reconstruction involves removing faulty or damaged valve cusps (tissue which regulates the direction of blood flow) and replacing these damaged cusps with tailor-made cusps made from either your own body tissue or treated animal tissue.

Why is it offered to me?

Your doctor has discussed your clinical case with colleagues in the multi-disciplinary cardiology team, to identify the best surgical treatment for you. Freeman Hospital has outstanding results and experience in aortic valve surgery. Until recently we have carried out aortic valve repair, valve replacement or the Ross operation. We are now adding aortic valve reconstruction to the range of operations we carry out on the aortic valve.

What is the advantage over other options?

Previously, if we did not think that we could satisfactorily repair your aortic valve we would have either replaced it or, if appropriate, carried out a Ross operation. We expect that aortic valve reconstruction will last longer than a standard tissue valve, work better than a tissue valve, and unlike a metallic valve does not require the need for anticoagulation (blood thinning) medicine which carries significant risks and is a lifelong requirement.

The other option is the Ross procedure which is a very good option. However, it might not be suitable for all patients; it also involves replacing your pulmonary valve (the valve controlling blood flow to the lungs) with a homograft (a valve that has been donated by someone who

passed away). We also know that if a Ross operation is carried out 50% of patients who have this will need another operation within 15 years.

Will it last for life?

Aortic valve reconstruction is a relatively new procedure and long-term results are not yet available. However, information available at present to us shows it is a particularly good option for children and young adults. As mentioned earlier, there is a higher likelihood of needing further surgery on the aortic valve after either valve replacement or the Ross operation, and unlike these other options, aortic valve reconstruction makes a second operation much less complicated if needed in the future.

Risk and side effects

Aortic valve reconstruction has similar operative risk as with other types of aortic valve replacement. At the end of the operation, the newly reconstructed valve function will be checked with ultrasound (Echo). In the unlikely situation where it is not functioning properly, it will be replaced by an artificial valve. This may lengthen the operation time but with no significant rise in operative risk.

Hospital stay

Hospital stay following aortic valve reconstruction is expected to be similar to other aortic valve surgical options. This differs from one patient to the other and will be explained to you by your surgeon in your clinic visit.

Aftercare and follow up

You will be regularly seen in our heart clinic following your surgery. We will write to your GP to make them aware of the new procedure and the planned follow up. In your planned visit to our clinic, your new valve will be checked regularly with ultrasound (ECHO) to assess its function. You will be, as well, given phone number to contact in case of emergency or if you have any questions.

For further information

Contact details

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PALS (Patient Advice and Liaison Service) for help, advice and information about NHS services. You can contact them on freephone 0800 032 02 02, e-mail northoftynepals@nhct.nhs.uk or text to 01670511098

Useful websites

If you would like further information about health conditions and treatment options, you may wish to have a look at the NHS Choices website at www.nhs.uk

If you would like to find accessibility information for our hospitals, please visit www.disabledgo.com

To find more about aortic valve reconstruction:
<https://avneo.net/en/top/>