Introduction

This leaflet explains how a balloon aortic valvuloplasty (BAV) is used to treat aortic stenosis. Please feel free to ask the nursing staff or your doctor any questions you have about the information below.

What is aortic stenosis?

The aortic valve is a small flap of tissue between the lower left chamber of your heart and the large artery (aorta) that takes blood around your body and to your vital organs. The aortic valve ensures that the blood runs in one direction only.

Aortic stenosis is when the valve narrows because of a build-up of calcium. This stops the valve from working properly and blocks the flow of blood out of the heart. This means your heart may have to work harder to force blood past the valve.

Symptoms of aortic stenosis are:

- weakness and shortness of breath during physical activity
- chest discomfort
- abnormal heart beats
- fainting spells
What is balloon aortic valvuloplasty (BAV) and what are the benefits of having this procedure?

BAV is the standard treatment for aortic stenosis and involves an operation to open the chest. BAV is offered to patients:

- who are unsuitable for open heart surgery or transcatheter aortic valve intervention (TAVI) as it is considered to be too high risk
- where we are not certain that the aortic stenosis is causing the symptoms
- as a method of minimising the need for further treatment and reducing the risk of surgery

The aim of the BAV is to reduce the narrowing in the valve by inflating a balloon inside it and widening the valve to allow blood to flow out of the heart.

The valve will gradually narrow again following the procedure. The length of time it takes for this to happen can vary between each patient.

What are the risks associated with BAV?

As with any operation, there are some risks involved with BAV. These vary from patient to patient:

- a potential risk is that widening the valve will stop it from closing properly and cause it to leak. This is known as regurgitation
- in our experience and in published data, other risks include: heart attack, stroke and disturbances to the heart rhythm
- internal bleeding from blood vessels as the device is inserted can occur as the blood vessels are often fragile due to your age and other disease processes

There is five per cent chance (1 in 20 patients) of complications occurring during the procedure. We carefully screen all our patients to ensure the complication rate is minimised, but please understand this is a high-risk procedure.

Is BAV right for me?

You are being considered for BAV after being reviewed by a consultant cardiologist or surgeon. They will review your echocardiogram (an ultrasound scan that looks at your heart and nearby blood vessels) and your medical history to ensure that you are suitable for the procedure. Your details will be discussed at our multidisciplinary team meeting to make sure that BAV is the most suitable option for you.

The other remaining option is medical management, which involves continuing with your medications to help with symptom control.
What happens during the procedure?
The procedure is carried out under local anaesthetic, in the catheter laboratory. It takes approximately one hour. During this time, and for a few hours after you will need to remain lying flat, but will be awake throughout.

The procedure involves attaching a deflated balloon to a narrow tube (called a catheter), and then passing this through a large blood vessel in your leg, up to the narrowed valve. This involves making a small hole (puncture) in your groin to insert the catheter.

We use x-rays to ensure the balloon is in the correct position. When the balloon is inside the valve it is inflated to widen the valve and allow blood to flow out more easily. At the end of the procedure the balloon is deflated and removed from the body.

If you do not already have a pacemaker, we will insert one temporarily for the procedure. This allows the doctors to increase your heart rate during the balloon inflation. During this time you may feel your heart beating fast and this can cause a light-headed or dizzy spell but this will only last for a few seconds. They need to do this to ensure the valve is correctly positioned. It will be removed after the procedure if there are no complications.

How do I prepare for the BAV?
If you are taking warfarin tablets, you must stop taking them five days before your procedure. Please speak to your cardiologist about this and whether you need an alternative blood-thinning medication during that time. **Do not stop taking warfarin tablets until you have discussed this with your doctor.**

Please only bring essential items that you need for your hospital stay – there is limited space on the wards so it is not advisable to bring too many belongings or any valuables.

What happens after the procedure?
You will have an echocardiogram immediately afterwards in the catheter lab. After this we will transfer you back to the one of the cardiac wards where the staff will monitor the groin puncture site regularly and your heart rate and blood pressure. You will need to lie flat for a few hours.

When can I go home?
You will need to stay on the cardiology ward overnight. The cardiology team will review your observations the next morning and check your groin site for any swelling or bleeding. If there are no concerns you may be discharged that day.

We would not advise that you travel home by yourself or take public transport. Where possible, relatives or friends should drive you home. Hospital transport is only available to those who meet the necessary criteria. Please call the transport assessment team on 020 3311 5353 for more information or speak to the nurses on the ward if you have any concerns about your journey home.
To support you post operatively we will:

- give you 14 days’ worth of tablets to take home and you will need to see your GP within one week of going home to renew your prescription
- give you a letter listing your tablets and describing the procedure and your stay with us
- send a copy of the letter to your GP

How to recover from the BAV

When you leave hospital, give yourself a week or so to get your strength back before returning to everyday activities. Avoid anything strenuous, such as lifting heavy objects, shopping, excessive pulling or pushing (such as gardening or vacuum cleaning). You can start with regular walks and increase their length on a daily basis. You do not have to avoid climbing stairs – just take them slowly and steadily at first.

After this time you should be back doing the things you used to do. You may even find that you can do more if the aortic stenosis was holding you back before.

Please remember that this information should be used as a guideline only – everyone is different.

Is there anything I need to watch out for at home?

If you notice that your leg wound becomes red, inflamed or oozing, then please contact your GP immediately as these may be signs of infection.

Also, if your wound starts to swell or bleed or you feel more breathless than before then seek help immediately. During working hours, you can contact the cardiac catheter lab at Hammersmith Hospital on 020 3313 1661. Out of hours, you can contact your GP or attend your local walk-in centre or A&E department.

When will I be able to drive again?

You are not legally allowed to drive for one month after the procedure. If you have a large goods vehicle (LGV) or passenger carrying vehicle (PCV) licence, you will have to have further testing before you get your licence back. You will need to discuss this with your doctor and your employer.

What about travelling by plane?

It is safe to fly to any destination one month after the procedure, provided that you have not had any complications and you are the passenger and not the pilot.

When can I return to work?

This will depend on many factors, such as the overall state of your health and the type of work you do. Please discuss this in more detail with your doctor.
Will I have to come back to hospital for a follow-up?

Yes. We will schedule a follow-up appointment for you 30 days after your procedure. You will receive a letter in the post confirming the date and time. We will then see you after six, 12 and 18 months.

Please do not hesitate to speak to one of your doctors or ward nursing staff if you have any questions or concerns.

How do I make a comment about my visit?

We aim to provide the best possible service and staff will be happy to answer any of the questions you may have. If you have any suggestions or comments about your visit, please either speak to a member of staff or contact the patient advice and liaison service (PALS) on 020 3313 0088 (Charing Cross, Hammersmith and Queen Charlotte’s & Chelsea hospitals), or 020 3312 7777 (St Mary’s and Western Eye hospitals). You can also email PALS at pals@imperial.nhs.uk. The PALS team will listen to your concerns, suggestions or queries and is often able to help solve problems on your behalf.

Alternatively, you may wish to express your concerns in writing to:

Complaints department
Fourth floor
Salton House
St Mary’s Hospital
Praed Street
London W2 1NY

Alternative formats

This leaflet can be provided on request in large print, as a sound recording, in Braille, or in alternative languages. Please contact the communications team on 020 3312 5592.

We have a free and premium wi-fi service at each of our five hospitals. For further information please visit our website: www.imperial.nhs.uk