

Patient information

Renal Angioplasty / Stent

Interventional Radiology Department

Introduction

This leaflet tells you about having a renal angioplasty and stent insertion. It is important that you read it and understand the information. If you have any further questions, you will be able to ask the doctor or nurse when you come for the procedure.

What is a renal angioplasty/stent?

The renal artery is the main blood vessel supplying blood to the kidney and it may become narrowed usually as part of “hardening of the arteries”. Renal angioplasty is used to open up narrow sections of the renal artery with a small balloon. In many cases a balloon does not widen the narrowing and a small metal tube (stent) is inserted and left inside to hold the artery open.

Why would you need to have a renal angioplasty and stent insertion?

The renal arteries supply blood to the kidneys. If the blood supply to the kidney is narrowed then the kidneys may not work properly and this can cause problems with high blood pressure or kidney failure. Opening up the artery with renal angioplasty and stent insertion improves the blood flow to the kidneys and may improve high blood pressure and kidney function.

What are the benefits of having renal angioplasty/stent?

Once the renal angioplasty and stent insertion have been done, this should improve the blood flow to your kidney. However, it is often difficult to know in advance whether it will improve blood pressure or kidney function for an individual patient and you should discuss this with your doctor/nurse before agreeing to the procedure.

What are the risks of having renal angioplasty/stent?

With any medical procedure there may be complications and it is important you know about these. Renal angioplasty and stent insertion has a small risk of complications but the procedure may not improve blood pressure and may make kidney function worse.

The overall risk of a serious complication is about one in every 20 procedures and although deaths have occurred after renal angioplasty and stent insertion this is very rare.

The most frequent complication is bruising at the groin or arm at the site of insertion of the needle. This usually settles down but occasionally needs a blood transfusion or a surgical operation to repair the artery.

The dye used can cause allergic reactions and occasionally damage the kidney. You must tell your doctor or nurse if you have a history of allergy or asthma and if you are allergic to antiseptics such as iodine.

The tubes, balloon or stent can damage the inner lining of the arteries as they are passed through and occasionally this can block the blood supply to the kidney, arm or leg.

Very rarely the artery may burst when stretched and if this cannot be repaired using a special covered stent an emergency operation may be required.

It is also possible to develop bleeding internally or at the puncture site and it is important to tell your doctor or nurse if you have a problem with easy bleeding or bruising or if you are taking tablets, which can affect bleeding such as **warfarin**, which will usually be stopped for a few days beforehand.

There is also the risk that your blood pressure may become low following the procedure and you may feel faint. This is usually dealt with at the time of the procedure.

It is important to balance these risks with the potential benefits of the procedure and your doctor will discuss with you whether having a renal angioplasty and stent insertion to improve your blood pressure or kidney function would make these risks worthwhile.

Are there any alternatives to renal angioplasty and stent insertion?

It may be possible to treat your high blood pressure and kidney failure with tablets and / or dialysis or a kidney transplant, which could have other complications. It may be possible to have an operation to repair the narrowed renal artery, but again, this option could have other complications. You should discuss these alternatives with your doctor or nurse.

If you agree to have a renal angioplasty and stent insertion you will be asked to sign the hospital's consent form which will also state that you have received information about the procedure and have discussed it with your doctor/nurse.

What will happen if I decide not to have treatment?

It is your absolute right to refuse any treatment and this will not affect your medical management. If you decide not to have renal angioplasty and stenting, then we will inform the clinical team that referred you and they will organise to see you in clinic and discuss alternative therapies.

What sort of anaesthetic will be given to me?

You will be given a local anaesthetic.

Local anaesthetic is drug-induced numbness: it may be provided by an anaesthetist, surgeon or other healthcare professional, depending on the technique used. Like all medicines, local anaesthetics may sometimes cause side effects, as well as the effects

that are needed. You may experience dizziness, blurred vision, drowsiness and occasionally loss of consciousness. These side effects are rare.

Serious side effects are very rare, and include fits, low blood pressure, slowed breathing and changes in heartbeat, which may be life-threatening. If you have any concerns about any of these effects, you should discuss them with your doctor.

For more information, please ask for a copy of the Royal College of Anaesthetists Patient Information "You and Your Anaesthetic".

If you are worried about any of these risks, please speak to your Consultant or a member of their team.

Where is it done?

The angioplasty and stent insertion is usually done in the Interventional Radiology Theatres, located within the Main Theatre complex by an interventional radiologist (a doctor who uses X-rays to see what he is doing during a procedure).

What do I need to do beforehand?

You should tell the staff about any tablets you take, particularly those that affect blood clotting, such as warfarin. Warfarin may need to be stopped for a few days before the test so it is very important that you tell the staff **when the test is booked**.

Please tell the staff if you have any allergies particularly any previous reactions to X-ray dye. You may be asked not to eat or drink for two to four hours before the procedure is done.

How long will it take?

The angioplasty and stent procedure usually take between one and two hours. Most patients are admitted to a hospital ward beforehand and you would usually expect to be kept in for at least one night after the procedure.

What does the procedure involve?

You will be asked to lie on your back on a special X-ray table. The skin over your groin, or for some patients the arm, will be cleaned with antiseptic and sheets placed around the area to keep everything clean. Local anaesthetic is then injected into the skin, which stings a little at first.

A special thin plastic tube is inserted into the artery through the numbed skin and guided to the renal artery. The Interventional Radiologist uses an X-ray dye injected through the tube to **make sure the tip is being moved into the right place**. The tube is guided through the narrow section of the artery and replaced with another tube fitted with a tiny balloon, which can be blown up to stretch up the narrowing.

Many patients have a stent placed in the renal artery to stop it from narrowing again. The stent is placed by the same route and is usually wrapped outside a balloon that is then guided into the narrow segment and inflated, pushing the stent outwards to fit the renal artery. The balloon is then removed leaving the stent in place.

To seal the tiny hole in the artery in the groin or arm someone will press on the skin over the artery for ten minutes. Sometimes a sealing plug is inserted into the artery wall using a 'closure device': this closes the hole in the artery much more quickly. Every case is not suitable for this device but if it is used you may be allowed to walk around fairly soon after the procedure.

Will it hurt?

Usually you should not feel any pain from the tubes and stent being passed through the arteries, though the local anaesthetic stings for a minute or two at the beginning of the procedure. You may feel a little discomfort in your back when the balloon is blown up. If you feel persistent pain then please let the radiologist know.

What happens afterwards?

Once the tube is removed and the pressing has finished you will be asked to lie in bed for a few hours to reduce the risk of further bruising. Your blood pressure and the puncture site of the artery will be checked frequently and you may have a blood test. You will usually be kept in hospital overnight.

There may be a little discomfort over the puncture site when the local anaesthetic wears off. Before you go home you will be told how to look after the puncture site of the artery. You may be advised to take tablets, such as aspirin, to thin the blood to prevent clotting in the renal artery around the stent.

If after you go home, you develop severe pain over the puncture site or in your back you should contact the hospital straight away or attend your nearest Emergency Department. If you develop bleeding from the puncture site or in your urine you should also contact the hospital straight away or attend your nearest Emergency Department.

Discharge Information

Going Home

You can expect to be discharged home the morning after the procedure. You may be given new tablets (i.e. aspirin) to take home with you. If you experience any problems at home relating to the procedure, please contact the ward in which you stayed.

Your wound

The procedure is performed through a 2-3mm wound in your groin or arm. There may be a small amount of bruising. Any excessive bruising or swelling should be brought to the attention of your doctor. Your wound does not require any dressings and will heal up over a few days.

Getting back to normal

Remember that you have just had an operation. It is normal to feel more tired than usual for a few days afterwards. You should take things easy for a day or two. You should carry on taking the medication that your doctors have prescribed for you.

Driving

You may be able to drive after the procedure, but you should ask your insurances company's permission before you do so.

Returning to work

You may be able to return to work quickly after the procedure. Make sure you feel up to working before returning. A few days off may be enough for some people.

Further Appointments

You will need to see the doctors that referred you for the procedure in the outpatient clinic. This normally takes place in the weeks following the procedure. The doctors may wish to test your blood and kidney function and alter the medicines that you have been taking.

Feedback

Your feedback is important to us and helps us influence care in the future

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further Information

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Author: Interventional Radiology Department
Review Date: March 2026

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