

## Coronary Angioplasty – Information for Patients

- Reference Number: HEY-806/2016
- Departments: Cardiology

This leaflet has been produced to give you general information. Most of your questions should be answered by this leaflet. It is not intended to replace the discussion between you and the healthcare team, but may act as a starting point for discussion. If after reading it you have any concerns or require further explanation, please discuss this with a member of the healthcare team.

### WHAT IS AN ANGIOPLASTY?

Angioplasty is the technique of mechanically widening a narrowed or blocked blood vessel. The heart is a muscle and needs a good blood supply in order to work properly. Your heart gets blood from three main blood vessels called coronary arteries. In coronary artery disease (also called coronary heart disease) one or more of these arteries narrows or blocks, meaning that not enough blood is getting to the heart muscle. This can cause symptoms such as chest discomfort (angina) and increases the risk of having a heart attack.

### WHAT ARE THE BENEFITS OF ANGIOPLASTY?

Following the procedure the blood supply to your heart should be better and this should improve the symptoms that you suffer. The amount of benefit is variable but you may find that:

- Your symptoms of chest pain improve or disappear completely.
- You are less breathless.
- You find it easier to walk and exercise.
- You may be able to reduce some of your medication.

### ATTENDING FOR THE PROCEDURE



Angioplasty is routinely performed as a day case procedure but an overnight admission may be necessary, this will be discussed at pre-assessment. The ward is open Monday 7am to Friday 8pm and visiting times are 6pm to 7.30pm. Patients admitted at 7.30am usually have their procedure between 8.30am and 1pm.

Those admitted at 11am normally have their procedure between 1.30 pm and 6pm. As emergencies take priority, delays sometimes occur. If you find that you have to wait longer than anticipated we are very grateful for your patience and understanding.

**You should eat a light meal before your admission. You will then be able to drink clear fluids up until the time of the procedure. Please avoid drinks containing caffeine (e.g. coffee, tea, and cola) for 12 hours before admission.**

Patients may be discharged 6 hours following the procedure. Patients requiring overnight stay will usually be ready to go home the following morning. Relatives and/or carers can contact the ward for updates.

You must have a responsible adult to collect and escort you home after your angiogram. If you are unable to arrange for a friend or relative to bring you in and take you home please contact your GP surgery who will help make alternative arrangements. Public transport is not advised for travel home. It is not always possible for the Ambulance Service to take patients home after 5pm, so please try to make alternative discharge arrangements if your anticipated discharge time is after 5pm.

Those requiring admission over the weekend, a longer hospital stay or urgent admission may be admitted to Ward 26 or Ward 28 at Castle Hill Hospital.

## MEDICATION

In general, you should continue to take your medications as normal. However, there are some instances where you will be advised to alter your tablet treatment before you come into hospital for the procedure. This will be discussed with the nurse practitioner at pre-assessment.

**It is very important that you bring a list of all your tablets and the doses prescribed whenever you attend the hospital.**

Medication that is usually stopped before the angioplasty includes:

- Warfarin (a tablet to thin the blood): this is usually stopped 5 days before treatment although this may vary depending on the reason for Warfarin being prescribed.
- Metformin (a tablet used in people with diabetes): this must be stopped for 24 hours before the angioplasty, and not restarted for 48 hours after the procedure.



■ Water tablets, such as Furosemide, are not usually taken on the day of the procedure.

**All other medications should be taken as normal.**

If you have any questions about medication please contact the nurse practitioners or Cardiology 5 Day Ward on (01482) 461518.

## THE PROCEDURE

In preparation for the procedure you will be asked to put on a hospital gown, and will have a small needle put into a vein in your arm so that, if needed, the doctor will be able to give you certain medications. The procedure itself is performed in a Cardiac Catheterisation Laboratory or "Cath Lab". During the procedure you will lie on the X-ray table and be attached to a heart monitor. The procedure is usually carried out from your wrist or the top of your leg. The skin is cleaned with antiseptic and your body is covered in a large sterile sheet. Using local anaesthetic to numb the skin (this may sting) a small tube (sheath) is placed into the artery at your wrist (radial artery) or the top of your leg (femoral artery). Through this sheath a long, fine tube (catheter) is passed through the blood vessels up to your heart. X-ray dye is injected into the heart's arteries whilst the X-ray machine moves around to locate the narrowing or blockage.

Using X-rays your doctor guides a fine wire through the narrowing. Over this wire, a small balloon is used to stretch the narrowing by squashing the fatty tissue (called atheroma) and make the inside of the vessel wider. Then, one or more stents are usually placed to reduce the risk of the area re-narrowing. Stents are small "mesh" tubes that remain in the artery to scaffold the area. During the angioplasty procedure, the doctor will give you blood thinning medication to reduce the risk of blood clots forming inside the stent.

### **When the blood vessel is completely blocked**

About 1 in 20 angioplasty procedures are undertaken because the artery is completely blocked. The success rate of opening completely blocked arteries is around 2 in 3 patients. This is lower than the success rate for less severe narrowing, as there is no small channel through the blockage, meaning it is more difficult to pass a wire and balloon. To help the doctor to guide the wire through the blockage it may be helpful to inject dye into both the left and right heart arteries at the same time. This means that two catheters are needed and so the doctor may need to place a tube (under local anaesthetic) into the top of both the left and the right leg.



Whilst the narrowing(s) is being stretched open it is quite common for you to be aware of some discomfort in your chest. This is not usually severe and will usually pass within a few minutes. If you get more severe pain then please let the doctor know and we can give you strong painkilling medication through the needle in your arm. The dye that is used can give some patients a strange warm sensation or make them feel as though they might have wet themselves – this is due to the dye and is not a cause for concern. The procedure time is quite variable – simple procedures may take only half an hour, whereas more difficult procedures can take over 2 hours.

### AFTER THE PROCEDURE

After the angioplasty procedure you will be taken back to the ward, where you will be kept under observation with the nurses checking your heart rate and blood pressure. The tube within the arm or at the top of your leg may be taken out immediately, or may stay in position until the blood thinning medication has worn off. To stop the puncture site from bleeding we may need to use a device to apply pressure over the blood vessel. If your procedure has been done from the leg, then you will have to remain in bed until the nurse is happy that there is no problem with the site. This may require a period of lying relatively flat with a pressure device in place, and it is advisable during this period to try to be relatively still so that the device does not move out of position. Once you are told you can sit up, there is still a (small) risk of the wound starting to bleed again. If you think that you are going to cough or sneeze, we recommend using your fingers to press on the area at the top of your leg to reduce the risk of causing it to bleed or bruise.

If your procedure has been done from the arm, then you should be able to walk around shortly after the procedure. It is important though that you try to rest the arm and avoid using the arm e.g. for housework, for the first couple of days after the procedure. The nursing staff must be happy with the puncture site prior to discharge.

### AFTER GOING HOME

You should drink plenty of fluids after the procedure but avoid alcohol for 24 hours. You can resume normal physical activity 48 hours after the angioplasty although our doctor will advise you should this be any different.

After you go home, you will be advised to seek medical advice if:

- The skin entry site becomes more painful or swollen.
- You develop a cold hand/foot on the same side as the procedure.
- You develop chest discomfort.



The DVLA require that you do not drive for one week after the angioplasty.

You do not need to inform them of your procedure unless you hold a group 2 licence (LGV/PCV) in which case, you are not allowed to drive for a minimum period of 6 weeks after an angioplasty. The DVLA usually require additional testing to be done to assess whether you meet the necessary requirements.

Before you leave hospital, you will be given a more detailed information sheet which includes the ward phone number for you to ring if you have any concerns.

### HOW SUCCESSFUL IS ANGIOPLASTY?

If the blood vessel is narrowed but not completely blocked, angioplasty is successful in over 95%. If, however, the artery is completely blocked, especially if this has been for several months or years, then the success rate is lower (see below). Some people have several areas that are narrowed and your doctor may recommend that you have the treatment done in two stages.

#### Restenosis

After the angioplasty has been performed successfully the same area may become narrowed again with scar tissue. This is a process called restenosis, and usually occurs during the first 6 months after the procedure. If a lot of scar tissue develops then symptoms such as angina may return and further treatment will be needed in around 1 in every 10 patients. For most people this will be with another angioplasty procedure, though a few patients are advised that they should consider undergoing bypass (open heart) surgery.

### WHAT HAPPENS IF IT IS NOT SUCCESSFUL?

If angioplasty is not successful then your doctor will discuss your options with you. The doctor may recommend one of the following options depending on your particular situation:

- Staying on tablet treatment.
- Bringing you back at a later date for a second attempt with angioplasty.
- Referring you to a heart surgeon to consider open heart surgery (a bypass operation).

### WHAT ARE THE RISKS?



### complications.

- **Bruising:** It is quite common for you to be a bit bruised around the site where the sheath has been inserted. Occasionally this bruising is more severe and in approximately 1 in 120 angioplasty procedures the blood vessel is damaged and may require further treatment such as an operation to repair it.
- **Reaction to the dye:** If you have ever had a test that uses radio-opaque dye and you have had a reaction to it, you should tell the doctor or nurse before you have your angioplasty. A reaction may be a rash, typically one that is itchy. Very rarely, a more severe allergic reaction may occur that may lead to swelling of the face and difficulty in breathing and requires emergency treatment from the doctors.
- **Radiation:** Angioplasty is performed using x-rays to guide the procedure. This means that you will be exposed to a small amount of radiation; however, if you require angioplasty, the benefits of having the procedure are greater than the risks from the radiation.
- **Serious complications:** Serious complications include death, heart attack, the need for emergency bypass (open heart) surgery, and stroke. The incidence of death is extremely low when the procedure is performed in a non-emergency situation but it is important that you are aware that there is a small risk.
- **Blood clots:** In approximately 1 in every 100 patients, the stent may suddenly block off due to a blood clot developing inside it (called a stent thrombosis). Before the angioplasty procedure, you will also be given two types of tablet treatment to reduce the chances of this happening. One of these is Aspirin, and the second one usually given is called Clopidogrel. One of these (usually Aspirin) must be continued life-long. Depending on the procedure you have had, you will need to take Clopidogrel for between 1 month and 1 year.



**It is very important that you take both Aspirin and Clopidogrel and do not stop taking them without seeking advice from your Cardiologist.**

**If you are unable to take aspirin, have a problem with bleeding, or are awaiting any other type of operation, you must tell the doctor/nurse before you have the angioplasty as this may influence the type of stent that is used.**

**Sudden blockage of the stent due to a blood clot can cause sudden severe chest pain and can lead to heart attack or death. Most of these clots occur within the first 7 days after the angioplasty so it is very important to call for emergency help (dial 999) if you get chest pains after the angioplasty.**

**Despite these possible complications, the procedure is normally very safe, and is carried out with no significant side effects at all.**

**It is important that we monitor your recovery after you have had an angioplasty, especially if you have any problems. In the next few months or years, we may contact you by telephone to see how you are getting on. Please keep us informed of any changes to your contact details. If you do not want us to contact you please let the nurse or doctor know before you go home, or let us know by ringing (01482) 626767.**

**Should you require further advice on the issues contained in this leaflet, please do not hesitate to contact the day ward on tel (01482) 461517 or 461518.**



## GENERAL ADVICE AND CONSENT

Most of your questions should have been answered by this leaflet, but remember that this is only a starting point for discussion with the healthcare team.

### Consent to treatment

Before any doctor, nurse or therapist examines or treats you, they must seek your consent or permission. In order to make a decision, you need to have information from health professionals about the treatment or investigation which is being offered to you. You should always ask them more questions if you do not understand or if you want more information.

The information you receive should be about your condition, the alternatives available to you, and whether it carries risks as well as the benefits. What is important is that your consent is genuine or valid. That means:

- you must be able to give your consent
- you must be given enough information to enable you to make a decision
- you must be acting under your own free will and not under the strong influence of another person

### Information about you

We collect and use your information to provide you with care and treatment. As part of your care, information about you will be shared between members of a healthcare team, some of whom you may not meet. Your information may also be used to help train staff, to check the quality of our care, to manage and plan the health service, and to help with research. Wherever possible we use anonymous data.

We may pass on relevant information to other health organisations that provide you with care. All information is treated as strictly confidential and is not given to anyone who does not need it. If you have any concerns please ask your doctor, or the person caring for you.

Under the Data Protection Act (1998) we are responsible for maintaining the confidentiality of any information we hold about you. For further information visit the following page: Confidential Information about You (<https://www.hey.nhs.uk/patients-and-visitors/confidential-information-about-you/>).



If you or your carer needs information about your health and wellbeing and about your care and treatment in a different format, such as large print, braille or audio, due to disability, impairment or sensory loss, please advise a member of staff and this can be arranged.





