



# Coronary Angiogram and/or Angioplasty and Stenting

### 1. What is a coronary angiogram?

An Angiogram is used to show any narrowing or blockage of your coronary arteries

### 2. What is angioplasty and stenting?

Angioplasty and stenting is often used instead of open heart surgery to treat narrowed or blocked coronary arteries.

You may have one or both of the following procedures.

A needle with a tube connected to it will be put in your arm. This is called an intravenous line or IV.

After an injection of local anaesthetic, a fine tube (catheter) is put into the artery in your groin or wrist. The tube is carefully passed into the coronary arteries. A series of pictures are taken using x-rays and x-ray dye.

If any narrowing or blockages are found then a tube with a tiny wire is passed down the affected artery so that a sausage shaped balloon can be passed over it and into the part that is narrowed or blocked.

To open up the artery, the balloon is blown up with fluid, which then presses against the plaque, pushing it out of the way.

#### The balloon

In some people,

- the coronary artery may be split or damaged; OR
- the artery may become narrowed again as the balloon goes down; OR
- the artery may become blocked again.

Most of the time, one or more stents may be placed in the artery to help keep the artery open. A stent is a metal tube or spring coil. This is passed into the diseased part of your artery using a balloon. The balloon is removed once the stent is in place.



The stent stays in for life (Some newer stents dissolve). After the procedure, you will be given drugs which reduce your risk of blood clotting and the stent blocking.

While the catheter is in the artery, a number of additional mechanical devices may be used to complete the procedure. These include pressure wires, an Intravascular Ultrasound (IVUS) or Optical Coherence Tomography (OCT).

If the heart becomes unstable during the procedure, an additional balloon device to stabilise the heart may be required. This is called an intracardiac balloon pump.

At the end of the procedure the artery may be closed with a special plug to stop the bleeding. Your Cardiologist will discuss this with you.

Medication such as Clopidogrel or Brilinta is used for up to four weeks and sometimes longer. A small daily dose of Aspirin may need to be taken for the rest of your life.

### 3. Anaesthetic

This procedure will require a local anaesthetic. Sedation may also be given.

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#### 4. What are the risks of this specific procedure?

There are risks and complications with this procedure.

They include but are not limited to the following.

**Common risks and complications (more than 5%) include:**

- Minor bruising at the puncture site.
- The coronary artery can become narrowed or blocked again. Many factors can influence this and your doctor will discuss these with you.
- Major bruising or swelling at the puncture site.

**Uncommon risks and complications (1- 5%) include:**

- Abnormal heart rhythm that continues for a long time. This may need an electric shock to correct.
- Loss of pulse in the wrist after a radial artery (wrist) procedure.
- A heart attack.
- Surgical repair of the groin/arm puncture site or blood vessel.

**Rare risks and complications (less than 1%) include:**

- The stent may suddenly close within the first month. This can cause angina or heart attack. It may be treated with another angioplasty or with surgery.
- Emergency heart surgery due to complications with the procedure.
- A reaction to the medications given to prevent blood clotting.
- Minor reaction to the x-ray dye such as hives.
- Loss of kidney function due to the side effects of the x-ray dye.
- A stroke. This can cause long term disability.

- An allergic reaction to the x-ray dye.
- A higher lifetime risk of cancer from x-ray exposure.
- Rupture of a blood vessel requiring surgical repair and blood transfusion.
- Skin injury from radiation, causing reddening of the skin.
- Death as a result of this procedure is rare.

A coronary angioplasty and possible stenting may be offered as a treatment option for patients presenting with heart attacks at some centres. An alternative treatment is for patients to be given a clot busting medication.

Outcomes after angioplasty and stenting depend upon the following:

- age of the patient
- number of arteries supplying blood to the heart that are diseased
- location of the heart attack
- time taken to present to the hospital following the heart attack
- degree of blood flow in the blocked artery
- clinical status of the patient.

The less of these risk factors you have the better the clinical outcomes. If more than one artery is diseased you may need further procedures after some time.

If you are having angioplasty and stenting as treatment for a heart attack, the risk of a poor outcome may be higher than the risks above and depend on the severity of the heart attack.

Disclaimer: This brochure has been prepared for information and for informed consent only and is not medical advice. All care has been taken to ensure the accuracy of the information. This information may be changed or updated without notice.

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