

Coronary Angioplasty and Stenting

Why do I need Coronary Angioplasty and Stenting?

Your doctor has ordered for this medical procedure, Coronary Angioplasty and Stenting, to help open blocked heart arteries. The medical condition that you are experiencing is atherosclerosis, which is the hardening of the heart's blood vessels, and requires angioplasty as a treatment option. This treatment option is recommended to you as medications that reduce the heart's demand for blood have not improved your heart health.

What is Coronary Angioplasty & Stenting?

Atherosclerosis narrows and hardens the heart's blood vessels, hence limiting the amount of the blood supply to the heart muscles. This may cause chest discomfort, breathlessness, irregular heart rhythm, fatigue and even a heart attack, especially during periods of physical exertion or stress.

Coronary angioplasty, also known as Percutaneous Coronary Intervention (PCI), can help to increase blood supply to the heart. In PCI, a balloon is mounted on a thin wire and is moved forward into your coronary artery until it lies within the narrowed blood vessel(s).

The balloon is then inflated at high pressures, often for a few times, to open up the narrowing. Your condition is often significantly improved when the balloon deflates.

A stent is a metal coil to provide support to the narrowed segment of the coronary artery after the "ballooning" process is done. This prevents the artery from collapsing and the narrowing of blood vessels from recurring. Modern stents are made of stainless steel or cobalt chromium and will not shift in the body. Nowadays, more than 90% of angioplasty will result in one to two stents implanted at the narrowed segments.



What can I Expect for the Procedure?

- 1.** Undergoing PCI is very similar to having a coronary angiogram, a procedure that you may have gone through earlier as the angiogram provides a "road map" for the PCI procedure. After injection of local anaesthetic, a plastic sheath or tube is inserted in an artery in the right or left either groin or wrist. Through this tube, a catheter or thin tube is moved forward to the "mouth" of the narrowed coronary artery.
- 2.** A thin wire is then threaded through the catheter and positioned in the coronary artery. It is along this wire that the balloon catheter is finally pushed into the artery and the balloon positioned over the narrowed area.

3. You may experience some chest pain during the process, and you should report the pain severity to your attending cardiologist. Stenting may also be carried out using the same technique. The stenting procedure may take half an hour to two hours, depending on the complexity of the diseased artery.
4. After a successful PCI, you will be closely monitored in a ward. During this period, the sheath may be kept in your groin for four to five hours. The sheath could also be removed immediately after the procedure. After removing the sheath, the puncture site at the groin will be compressed for about 15 minutes and a tight bandage applied to ensure that there is no bleeding.
5. However, if the procedure was done through the wrist, the catheter will be removed immediately after the procedure followed by the application of a compressive bandage around the wrist. You will have to remain in bed until the next day to ensure that the puncture site is healed sufficiently before you are allowed to walk. Some blood tests and electrocardiograms (ECGs) will be performed to monitor your condition. If there are no side effects, you can be discharged the day after a successful PCI procedure. At the point of discharge, you will be given two anti-blood-clotting medications – Aspirin and Clopidogrel/Ticagrelor. You should continue to take Aspirin indefinitely to prevent future heart attacks, unless instructed otherwise by your doctor.

Inform Your Doctor On:

- Any allergies, particularly to iodine, X-ray contrast medium and pain-relieving medications.
- If you are suffering from diabetes and taking a medication called Metformin. You will need to stop this medication for at least 2 days before and after the angiography.



What are the potential risks?

Coronary angiography is generally safe.

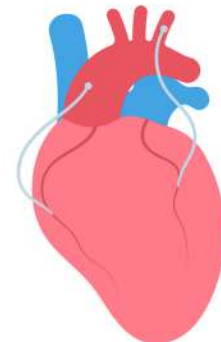
However, some potential risks include:

- Minor complications such as bleeding, swelling and bruising from the puncture site and allergic reaction to the contrast medium.
- Very rare major complications such as heart attack, stroke or death during the procedure.



When will I know the results?

Your doctor will discuss the results of the angiogram and the next step of your treatment with you after the procedure.



Contributed by Cardiology

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