Percutaneous Coronary Intervention (PCI)

Introduction
Percutaneous coronary intervention (PCI) is used to dilate and maintain patency for any narrowing of the coronary arteries (arteries that supply blood to substantial heart muscle). This procedure is performed with the use of X-ray, through percutaneous method (commonly through femoral or radial arteries).

Importance of Procedure
PCI is an invasive procedure subsequent to coronary angiogram. Coronary angiogram provides a clear picture of the severity of narrowing of coronary arteries. The procedure may follow coronary angiogram simultaneously. Coronary intervention serves to open up the artery and improve the heart function. In emergency situation caused by acute coronary syndrome (heart attack), this procedure is essential and can be life-saving. If this procedure is refused, the consequence can be detrimental. Alternative modalities include bypass surgery and medical treatment. Please consider different options carefully and ask your doctor for details.

Pre-Procedure Preparation
- You will be invited to a ward or a clinic for some preliminary tests including electrocardiogram, chest X-ray, and blood tests. We will also check your allergy history.
- Our medical staff will explain to you and your relatives the procedure and its risks, and present to you this information leaflet. You have to sign an informed consent.
- Blood thinning drugs or metformin (for diabetes) may have to be stopped several days before the procedure. Special anti-platelet drug should be taken before the intervention. Steroid will be given if there is history of allergy.
- Fasting of 4-6 hours is required prior to the procedure. An intravenous drip will be set up. Shaving may be required over the puncture site.
- If you are a female, please provide your last menstrual period (LMP) and avoid pregnancy before the procedure as this procedure involves exposure to radiation.

Patient’s Label

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The Procedure

- This is an invasive procedure that is performed under local anesthesia in a cardiac catheterization centre.
- Electrodes are adhered to the chest to monitor the heart rate and rhythm. Blood oxygen monitor through your finger tip will be set up. Measurement of blood pressure from your arm will be taken during the examination.
- A small wound is made either from the groin or the arm for access to arteries or veins.
- Catheters are advanced to the heart under X-ray guidance.
- Pressures within the heart are measured.
- Contrast is injected and films are taken. Narrowing in the coronary arteries is identified.
- In general, a special catheter is placed in a coronary artery with narrowing. A guide wire is passed through the narrowing. The guide wire is used as a track to allow a balloon to go to the narrowing. The balloon is inflated to open up the artery. A stent is then deployed permanently inside the artery to keep it patent.
- Other techniques may be adopted to improve the success and outcome of the procedures. Please discuss with your doctor the procedure involved as new advance in PCI cannot be fully discussed in this leaflet.
- During the procedure, you will be asked to hold your breath or cough. Transient chest pain may be experienced during balloon dilatation. If you experience severe or persistent chest pain, dizzy spell or any discomfort, you are required to inform the staff.

Post-Procedural Care

- After the procedure, catheters will be removed. The wound site will be compressed or sutured to stop bleeding.
- Nursing staff will check your blood pressure, pulse and wound regularly.
- Bed rest may be necessary for 4 hours. In particular, please do not move or bend the affected limb. Whenever you cough or sneeze, please apply pressure on the wound with your hand.
- You should inform your nurse if you have any discomfort in particularly chest discomfort or find blood oozing from the wound site.
- Once diet is resumed, please take more fluid to help eliminate contrast by passing urine.
Post-Procedural Follow-Up

- Usually you can be discharged 1 day after the procedure.
- The wound will be inspected and covered with light dressing. Please keep the wound site clean and change dressing if wet. In general, showers are allowed after 2 days.
- Please avoid vigorous activities (household or exercise) in the first 3 days after the procedure. Bruising around the wound site is common and usually subsides 2-3 weeks later. If you notice any signs of infection, increase in swelling or pain over the wound, please contact your doctor immediately.
- Usually your doctor has explained to you the results of the procedure before discharge. Should you have further questions, you and your close relatives can discuss with your doctor during subsequent follow-up.

Risks

- The procedure carries certain risks. Total major complications account for 2.1-12.7% according to different reports (Reference 1). Risk varies according to patient factors, lesion factors and clinical circumstances. Please consult your doctor for individual assessment.
- Major complications include death, heart attack, stroke and perforation of heart chamber. Other major complications include arrhythmias, vascular complications, contrast reaction, renal failure and haemodynamic complications.
- Minor complications include allergy to contrast reaction, nausea, and groin complications. Bruising around the wound site is common.
- Re-narrowing of the dilated coronary lesion might occur in 5-40% a few months after the procedures. The rate varies according to many different factors. The use of different types of stents is an example.

Remarks

- It is hard to mention all the possible consequences if this procedure is refused.
- The list of complications is not exhaustive and other unforeseen complications may occasionally occur. The risk quoted is in general terms. In special patient group (e.g. diabetics), the actual risk may be higher.
- Should a complication occur, another life-saving procedure or treatment may be required immediately.
- If there is further query concerning this procedure, please feel free to contact your nurse or your doctor.

Reference:


Patient's Label