

Procedure Information Sheet - Cardiac Catheterization and Coronary Angiogram

Hosp No. :	HKID No.:
Case No. :	
Name :	
DOB :	M / F
Adm Date :	
Contact No. :	

1. Introduction

- 1.1. Cardiac catheterization is used to investigate the structure and function of the heart. Coronary angiogram is used to investigate for any narrowing of the coronary arteries (arteries that supply blood to heart muscle). Both procedures are performed with the use of X-ray. Apart from exceptional cases, both procedures can be performed together.

2. Importance of Procedure

- 2.1. This is an invasive procedure. Cardiac catheterization can provide in-depth and specific information of various cardiac diseases. Coronary angiogram can provide a clear picture of the severity and location of narrowing in the coronary arteries. These can help doctor formulate the plan of management. In emergency situation caused by acute coronary syndrome (heart attack), the procedure is important in diagnosis. It is also a step stone to coronary intervention which serves to open up the artery and improve the heart function. This approach, despite its invasiveness, can be life-saving and the consequence can be detrimental if it is delayed. Even though there exist other alternative investigative tools, the information they provide are indirect and less specific. (Please ask your doctor for details)

3. Preparation before the procedure

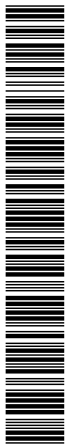
- 3.1. You will be invited to a ward or out-patient clinic for some preliminary tests including electrocardiogram, Chest X-ray and blood tests. Medical staff will check patient's allergy history. These can be performed days before the procedure or on the day of admission.
- 3.2. Doctor will explain to you and your relatives the details of the procedure together with the possible risks and complications. You have to sign an informed consent.
- 3.3. Blood thinning drug (warfarin) or diabetic drug (metformin) may have to be stopped several days before the procedure. Steroid will be given if there is history of allergy. Special anti-platelet drug should be taken if PCI is also planned.
- 3.4. Fasting of 4-6 hours is required prior to the procedure. An intravenous drip may be set up. Shaving may be required over the puncture site.
- 3.5. Female patient needed to provide her last menstrual period (LMP) and avoid pregnancy before the procedure as this procedure involves exposure to radiation.

4. The Procedure

- 4.1. This procedure is performed under local anesthesia in a cardiac catheterization centre.
- 4.2. You are awake during the procedure, but doctor may give you sedation to calm you down.
- 4.3. 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.
- 4.4. A small wound is made over the groin, wrist or neck for access to arteries or veins.
- 4.5. Catheters are advanced to the heart under X-ray guidance.
- 4.6. Pressures within the heart are measured. Blood samples are drawn from various heart chambers to determine their oxygen saturation.
- 4.7. Contrast is injected and films are taken.
- 4.8. During the procedure, you may be asked to hold breath or cough. You may experience a hot flush feeling when contrast is injected.

5. After the Procedure

- 5.1. After the procedure, catheters will be removed. The wound site will be compressed to stop bleeding. Sometimes special devices are used to stop bleeding.
- 5.2. Nursing staff will check your blood pressure, pulse and wound regularly.



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- 5.3. Bed rest may be necessary for few hours. In particular, please do not move or bend the affected limb. If the wound is over the groin, please apply pressure with your hand over the wound when you cough or sneeze so as to prevent re-bleeding.
- 5.4. You should inform the nurse if you find blood oozing from the wound site.
- 5.5. Usually you can eat and drink after the procedure unless contraindicated. Fluid intake are encouraged in order to excrete the contrast.

6. Follow Up

- 6.1. Usually you can be discharged on the same day or one day after the procedure.
- 6.2. The wound will be inspected and covered with light dressing. Please keep the wound site clean and change dressing if wet. In general, shower is allowed after 1-2 days.
- 6.3. Please avoid vigorous activities (household or exercise) in the first few days after the procedure.
- 6.4. Bruising around the wound site is common and usually subsides 2-3 weeks later.
- 6.5. If you notice any signs of infection, increase in swelling or pain over the wound, please come back to the hospital or visit a nearby Accident and Emergency Department immediately.
- 6.6. 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.

7. Risk and Complication

- 7.1. Common Risks and Complications
- 7.2. The procedure carries certain risks. Minor complications include allergic contrast reaction, nausea, and groin complications.
- 7.3. Uncommon Risks with Severe Consequences
- 7.4. Total major complications account for 1.7%. These include death (0.1%), heart attack (0.05%), stroke (0.07%), perforation of heart chamber (0.03%), aortic dissection and severe bleeding. Other major complications include arrhythmias, vascular complications, anaphylactic reaction to contrast and hemodynamic complications.
- 7.5. 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.
- 7.6. Broken guidewire (0.1-0.8%).

8. Simultaneous Coronary Intervention

- 8.1. When indicated, percutaneous coronary intervention (PCI) can be performed at the same setting of cardiac catheterization and coronary angiogram. You will be informed of this possible arrangement before the procedure. Please see the information leaflet on PCI. If you agree, you also need to sign the informed consent on PCI. Matters concerning the charges of PCI have to be arranged before the procedure.
- 8.2. If there is further query concerning this procedure, please feel free to contact your nurse or your doctor.

9. Reference

- 9.1. American College of Cardiology Foundation, American Heart Association (1999). Guidelines for Coronary Angiography: Executive Summary and Recommendations. Retrieved from: <http://circ.ahajournals.org/content/99/17/2345>
- 9.2. Hospital Authority (2016). Smart Patient. Retrieved from: <http://www21.ha.org.hk/smartpatient/SPW/en-US/Home/>



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I, _____ acknowledged that the above information concerning the operation or procedure has been explained by Dr _____. I have also been given the opportunity to ask questions and received adequate explanations concerning the condition and treatment plan.

Name:	
Patient No.:	Case No.:
Sex / Age:	Unit Bed No.:
Case Reg. Date & Time:	

Patient Signature: _____

Patient Name: _____

Date: _____

