

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

## Procedure Information Sheet - Temporary Transvenous Pacing

### 1. Introduction

1.1. Heart rhythm is mainly controlled by the conduction system of the heart. Any abnormality in the conduction system may result in abnormal heart rhythm (arrhythmia). Arrhythmias with slow heart rate cause dizziness, syncope, heart failure or occasionally cardiac death. Temporary transvenous pacing (TVP) is used to treat patients with slow heart rate that causes symptoms. It may be performed as an emergency procedure. It consists of an external generator and leads which connect the generator to the patient's heart. If the heart rate is slow, the external generator will stimulate the heart at a desirable rate.

### 2. Importance of Procedure

2.1. TVP is an effective short-term treatment for patients with slow heart rate. If slow heart rate was untreated, patients can develop syncope, heart failure, or occasionally cardiac death. TVP can also serve as an intermediate step before subjecting patients to permanent cardiac pacemaker implantation. If you refuse this procedure, the result may be detrimental. Alternative treatments include temporary transcutaneous or transesophageal pacing, and medical therapy (by giving inotropes).

### 3. Before the Procedure

- 3.1. You need to sign an informed consent.
- 3.2. An intravenous access will be set up.
- 3.3. Shaving near the puncture site may be required.

### 4. The Procedure

- 4.1. This invasive procedure is performed under local anesthesia at bedside or in a cardiac catheterization centre or an X-ray room.
- 4.2. 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.
- 4.3. A small wound is made over the groin or neck for access to veins.
- 4.4. A pacing lead is inserted through the venous puncture site into the vein, then to the heart under X-ray guidance. If "balloon floating" pacing lead was used, X-ray guidance was not needed.
- 4.5. The pacing lead is connected to an external generator.
- 4.6. Adjustment of pacing lead and generator is necessary to produce desirable pacing rate.
- 4.7. The procedure usually takes about 30 minutes.

### 5. After the procedure

- 5.1. After the procedure, you will be kept on close monitoring in the ward.
- 5.2. Nursing staff will check your pulse and wound regularly.
- 5.3. Avoid vigorous arm or leg movement on the operated side.
- 5.4. Care should be taken not to disconnect the leads from the external generator while moving in bed.
- 5.5. Mild wound pain is common. You may take simple analgesic to relieve pain.
- 5.6. The pacing lead may be removed a few days later, or you require a permanent cardiac pacemaker implant before TVP is stopped.

### 6. Risk and Complications

- 6.1. The procedure carries certain risks.
- 6.2. Major complications include death (<0.1%) and serious heart or lung perforation (<0.1%).
- 6.3. Other potential risks include wound infection (<1%), wound haematoma (<1%), vein thrombosis (<1%), air embolism, contrast allergy, vascular injury, pneumothorax and haemothorax.
- 6.4. The lead might displace with lose of capture, and re-position/re-insertion of lead might be needed.
- 6.5. Broken guidewire (0.1-0.8%).

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### 7. Remarks

- 7.1. It is hard to mention all the possible consequences if this procedure is refused.
- 7.2. 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, the actual risk may be higher.
- 7.3. Should a complication occur, another life-saving procedure or treatment may be required immediately.
- 7.4. If there is further query concerning this procedure, please feel free to contact your nurse or your doctor.

### 8. Reference

- 8.1. American College of Cardiology Foundation, American Heart Association (2008). Guidelines for Device-based Therapy of Cardiac Rhythm Abnormalities. Retrieved from:  
<http://circ.ahajournals.org/content/circulationaha/117/21/e350.full.pdf>
- 8.2. Hospital Authority (2019). Smart Patient. Retrieved from:  
[https://www.ekg.org.hk/pilic/public/Cardiac\\_PILIC/Cardiac\\_TempTransvenousPacing\\_0025\\_eng.pdf](https://www.ekg.org.hk/pilic/public/Cardiac_PILIC/Cardiac_TempTransvenousPacing_0025_eng.pdf)

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.:

Sex / Age:

Case Reg. Date & Time:

Case No.:

Unit Bed No.:

Patient Signature: \_\_\_\_\_

Patient Name: \_\_\_\_\_

Date: \_\_\_\_\_

