



## Procedure Information – Temporary Transvenous Pacing

Visit No.: Dept.:  
Name: Sex/Age:  
Doc. No.: Adm. Date:  
Attn. Dr.:

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Patient No.: PN

*Please fill in /  
affix patient's label*

### Introduction

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.

### Importance of Procedure

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).

### The Procedure

1. This invasive procedure is performed under local anesthesia at bedside or in a cardiac catheterization center or an X-ray room.
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.
3. A small wound is made over the groin or neck for access to veins.
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.
5. The pacing lead is connected to an external generator.
6. Adjustment of pacing lead and generator is necessary to produce desirable pacing rate.
7. The procedure usually takes about 30 minutes.

### Risks and Complications

#### Major complications:

- Death (<1%)
- Serious heart or lung perforation (<0.1%)

#### Minor complications:

- Wound infection (<1%)
- Air embolism
- Pneumothorax
- Wound haematoma (<1%)
- Contrast allergy
- Haemothorax
- Vein thrombosis (<1%)
- Vascular injury
- The lead might displace with lose of capture, and re-position/re-insertion of lead might be needed.

### Before the Procedure

1. Your doctor will explain to you the reason, procedure and possible complications. You will need to sign a consent form.
2. An intravenous access will be set up.
3. Shaving near the puncture site may be required.



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### After the Procedure

1. After the procedure, you will be monitored closely in the ICU/ward.
2. Nursing staff will check your pulse and wound regularly.
3. Avoid vigorous arm or leg movement on the operated side.
4. Care should be taken not to disconnect the leads from the external generator while moving in bed.
5. Mild wound pain is common. You may take simple analgesic to relieve pain.
6. The pacing lead may be removed a few days later, or you require a permanent cardiac pacemaker implant before TVP is stopped.

### Remarks

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. Should a complication occur, another life-saving procedure or treatment may be required immediately. For further information, please contact your doctor.

### Reference

Hospital Authority – Smart Patient Website

I acknowledge that the above information concerning my operation/procedure has been explained to me by Dr. \_\_\_\_\_. I have also been given the opportunity to ask questions and receive adequate explanations concerning my condition and the doctor's treatment plan.

\_\_\_\_\_  
Patient / Relative Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Relationship (If any)

\_\_\_\_\_  
Date