



Temporary Transvenous Pacing

Procedure Information Sheet

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.

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 patient refuses this procedure, the result may be detrimental.

Indication

Abnormality in the conduction system resulting in abnormal heart rhythm (arrhythmia). Arrhythmias with slow heart rate cause dizziness, syncope, heart failure or occasionally cardiac death.

The Operation / Procedure

- 1. This invasive procedure is performed under local anesthesia at bedside or in a cardiac catheterization centre or an X-ray room.
- 2. Electrodes are adhered to the chest to monitor the heart rate and rhythm. Blood oxygen monitor through finger tip will be set up. Measurement of blood pressure from the 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.

Before the Operation / Procedure

- 1. Patient need to sign an informed consent.
- 2. An intravenous access will be set up.
- 3. Shaving near the puncture site may be required.

After the Operation / Procedure

- 1. After the procedure, patient will be kept on close monitoring in the ward.
- 2. Nursing staff will check 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. Patient may take simple analgesic to relieve pain.
- 6. The pacing lead may be removed a few days later, or patient requires a permanent cardiac pacemaker implant before TVP is stopped.

Patient's Label	
Patient Name:	
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Risk and Complications

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

Alternative Treatment / Investigation

Alternative treatments include temporary transcutaneous or transesophageal pacing, and medical therapy (by giving inotropes).

Disclaimer

This leaflet only provides general information pertaining to this operation / procedure. While common risks and complications are described, the list is not exhaustive, and the degree of risk could also vary between patients. Please contact your doctor for detailed information and specific enquiry.

Date:_

Reference

Smart Patient Website by Hospital Authority: Temporary Transvenous Pacing (4/2019)

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Patient's Signature:_