



Procedure Information

Temporary Cardiac Pacing

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 may result in dizziness, syncope, heart failure or even sudden cardiac death. Temporary Pacing (TP) is used to treat patients with slow heart rate that causes symptoms. It may be performed as an emergency procedure.

TP is a short-term treatment for patients with extremely slow heart rate. If left untreated, patients can develop syncope, heart failure, or even cardiac death. It can also serve as an intermediate step before putting patients for permanent cardiac pacemaker implantation. If patient refuses this procedure, the outcome may be serious. Alternative short term treatments include temporary transcutaneous external pacing and medical therapy (by giving inotropes).

Outcomes

TP consists of an external generator and pacing wire(s) which connect the generator to the patient's heart. If the heart rate is extremely slow, the external generator will stimulate the heart at a desirable rate. It is significant help to reduce the risk and morbidity of arrhythmia.

Procedures

1. The procedure is performed under local anaesthesia at cardiac catheterization laboratory or operation room or medical ward with X-ray imaging system facilities.
2. Cardiac monitoring will be required. Blood oxygen level and blood pressure will be measured during the procedure.
3. A small wound is made over the groin or neck for access to veins.
4. Pacing wire will be inserted through the venous puncture site into right heart chamber.
5. The pacing wire is connected to an external generator.
6. The position of pacing wire and output of generator will be adjusted to reach optimal heart rate.
7. Depends on individual case, the procedure usually takes about 30 to 60 minutes.

Possible Risks & Complications

1. Minor
 - i) Wound infection (<1%)
 - ii) Wound haematoma (<1%)
 - iii) Air embolism
 - iv) Vascular injury
 - v) Vein thrombosis (<1%)
 - vi) Contrast allergy
 - vii) Pneumothorax
 - viii) Haemothorax
2. Displacement of lead with loss of capture may result in re-position or re-insertion of lead.

3. Major
 - i) Heart perforation (<0.1%)
 - ii) Lung perforation (<0.1%)
 - iii) Death (<1%)

** The risks listed above are in general terms and the possibility of complications is not exhaustive. Please understand that even though all operations are carried out with utmost professionalism and care, this does not rule out the possibility of complications arising. In the event of peripheral organ damage or post-operative haemorrhage or leakage, further operations may be required.

Pre-procedure Preparations

1. Good hygiene can prevent wound infection.
2. The procedure and possible complications will be explained by the doctor and a consent form must be signed prior to the procedure.
3. Please inform the doctor and nurse all your past medical history, previous surgical operations, current medication and any complication with drug or anaesthesia.
4. No food or drink four to six hours before the procedure. (Except emergency situation). Intravenous infusion may be prescribed.
5. Shaving may be required over the puncture site.

Post-procedure Instructions

1. After the procedure, you will be under close monitoring in the ward. The heart rate and wound will be checked regularly by nurse.
2. Vigorous arm or leg movement on the operated side should be avoided.
3. Care should be taken not to disconnect the pacing wire from the external generator.
4. Mild wound pain is common. Analgesic may be needed as doctor's prescription.
5. The wound is covered with light dressing. The dressing should be kept clean and dry.
6. If heart rate resumes normal, the temporary pacing lead and the generator may be removed few days later. However, if you require a permanent cardiac pacemaker implantation, temporary pacing should not be removed before the procedure.

Should there be any enquiries or concerns, please consult the attending doctor.

Under the professional care of the doctor, you will gradually recover. We wish you all the best during your treatment and recovery.

If you have any questions after reading the entire leaflet, please write them down in the spaces provided in order for the doctor to further follow-up.

Compiled by Union Hospital Operating Theatre (OT) Governance Committee

The above information is for reference only, please enquire your physician for details
Our Hospital reserves the RIGHT to amend any information in this leaflet without prior notification

