



Cardiac Electrophysiologic Study (EPS) and Radiofrequency Catheter Ablation (RFCA)

1. Purpose

Cardiac electrophysiologic study (EPS) is the best way for the doctors to evaluate the mechanism of your arrhythmia. It records the electrical conduction of heart and even induces an episode of arrhythmia if needed, for the purposes of clarifying the mechanism of the arrhythmia and guiding the treatment of arrhythmia.

Radiofrequency catheter ablation (RFCA) is the very effective treatment for cardiac arrhythmia. After confirming the mechanism via EPS, the arrhythmia generating focus can be detected and ablated by the catheter. It obviates the open-heart surgery and the need for long-term medical control.

2. Indication

- (1) The arrhythmia patient who fails to achieve good control with anti-arrhythmia drugs.
- (2) Patients who fail to tolerate the side effects of the anti-arrhythmia drugs.
- (3) Patients who are not suitable for cardiac pacemakers.
- (4) Young patients with critical arrhythmia which needs electrical

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All information above has been reviewed by Cardiology specialists
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conducting information of heart to guide further therapy or to determine if pacemaker or implantable defibrillator is indicated or not.

- (5) Pregnant women but not absolute indication (for whom be not suitable to take the antiarrhythmic drugs)

3. Preparation

- (1) Doctors will explain the procedure details including the risks, the possible benefits, and the successful rate. Nurse practitioner or registered nurse will explain precautions (That is, something you need to be aware of) of both before and after the surgery in the night before.
- (2) The patient or the family member needs to sign the consent form before the examination.
- (3) Discontinue anti-arrhythmic drugs with doctor's instruction, complete the EKG exam, and receive cardiac ultrasonography or trans-esophageal ultrasound before EPS exam.
- (4) Your nurse will shave your perineal and inguinal region to reduce the infection rate.
- (5) Your nurse will check and mark your dorsalis pedis pulsation site over both instep and evaluate lower limbs blood circulation before the examination.
- (6) Receive necessary examination including the blood tests, chest X-ray, electrocardiogram, echocardiograms etc. before EPS/RFCA.
- (7) You will have to be fasted for 6 to 8 hours (one meal) before EPS/RFCA.

- (8) We will set an intravenous catheter on your left forearm. You need to put on your inpatient clothes, and take off your glasses, underwear, dentures, accessories and watch before the examination.
- (9) Please make sure you have already emptied your bladder before examination.
- (10) Your families have to stay at the waiting room of Cardiac catheterization room during the whole course of electrophysiologic study.

4. EPS/RFCA procedures

In cardiac catheterization room, doctors will place three catheters through your vessels after sterilizing and applying local anesthesia medication. In normal situation, we'll choose right femoral artery, left femoral vein, and right internal jugular vein for placing catheters. Finally, the tips of catheters will be sent into heart chambers for recording the electrical signals of the heart. Focus of arrhythmia will be mapped and detected during EPS. Then, the lesion which causes the arrhythmia will be ablated. After that, doctors might give some attempts to induce the arrhythmia for confirming that the culprit arrhythmia could not be induced anymore after RFCA. The procedures are done under local anesthesia and you are conscious during the process.

5. After EPS/RFCA

- (1) You will be transferred to ICU for intensive observation including continuously electrocardiogram monitoring, periodically vital sign measuring, and so on.
- (2) You may try drinking some water after the examination. If there isn't any discomfort after that, you can try eating some plain food.

- (3) Your nurse will check your blood pressure, pulse, respiration, lower limbs pulsation every 15 minutes. If there's any discomfort or if you need any help, please don't hesitate and let us know immediately.
- (4) Sand bags compression on the puncture sites for 6 hours is necessary for optimal hemostasis. You have to undergo absolute bed rest for 8 hours. Besides, you should also avoid raising your head and keep your knee straight during this period.
- (5) Be aware of wet and sticky feeling at your puncture sites, which might be the sign of bleeding. Please inform our staff immediately if it happened.
- (6) If you have to cough or to sneeze please compress the wound before you do so to prevent bleeding.
- (7) You can get off the bed carefully after having proper bed-rest for 8 hours. We suggest you try sitting up straight, then dangling your leg at bedside, and finally, try standing if there isn't any discomfort like dizziness or fainting .We will lock your intravenous catheter for your convenience to walk around.
- (8) We will change the wound dressing over puncture wound one day after EPS.

6. After discharged

- (1) Please come back to cardiac EPS outpatient clinic for follow-up visits on scheduled date.
- (2) Be aware of symptoms like palpitations, dyspnea or chest pain, which might be caused by recurrent arrhythmia or delayed complication. If it developed, please don't hesitate to come back to our emergent department and ask for evaluation.

- (3) You may resume usual daily activity one week after discharged from hospital.
- (4) Please remove the dressing over puncture site one day after discharged, if the puncture site is still bleeding, please come back to the emergency room immediately.
- (5) If you still have any question, please don't hesitate to call (04)23592525-6055 or 3138 for consultation.