

Radiofrequency Ablation of Premature Ventricular Contractions (PVC)

How should I prepare?

1. Once you have decided to undergo an EP study and radiofrequency ablation for premature ventricular contractions, you will be scheduled for the procedure.
2. You will receive instructions through the mail and/or by the telephone 2-4 weeks before the procedure. You may be asked to stop certain medications days prior to the procedure.
3. You may be asked to have certain test performed such as blood tests, MRI (magnetic resonance imaging) of the heart, nuclear tests or event monitors.
4. Do not eat after midnight on the day of the procedure.
5. Pack an overnight bag.
6. Make arrangements for someone to drive you home usually the following day.
7. Bring a list of your current medications, contact information of your primary care physician and cardiologist (if any) as well as a copy of your Advance Directives for Health Care. For those who use CPAP/BiPAP machine when sleeping, please bring it with you as well.
8. Shave both sides of your groin area. Shower on the morning of the procedure.

What will the treatment be like?

Pre-procedure:

Once you've arrived at the University of Michigan Hospital Cardiovascular Center, register at the Cardiac Procedures Unit located in Floor 2A. You will then be brought into the preparation area where you will be asked to wear a

hospital gown, have your vital signs (blood pressure, heart rate and respiration rate) taken and where you will be examined by your health team. The procedure will be explained to you and your written consent will be obtained. This is a good opportunity for you to ask questions. An intravenous (IV) fluid will be administered through a catheter in your vein to deliver medications during the procedure. Certain blood tests will be performed. If not yet done, both sides of your groin will be shaved. You will have ECG (electrocardiogram) patches needed for the procedure, placed in your chest, trunk and extremities. Friends or family members may join you once you are prepared adequately by your health team.

Procedure:

You will then be brought into the procedure room. The room has several computers, monitors, ultrasound, X-ray and other equipment that may be used during the procedure. You will be transferred to a procedure table and then hooked to the heart monitors and equipment. You will be lying down flat on your back with both legs straight. There will be at least 2 electrophysiology physicians who will be performing the procedure. There will also be nurse(s) and technicians who will help facilitate and assist in the procedure to ensure your safety and comfort. You will be under “conscious sedation”, meaning that you will receive sedatives and pain medications to help you relax. You may feel drowsy, sleepy but not totally unconscious. Sedatives may interfere in the induction of the PVC therefore it is preferred that patients are not deeply sedated. Please let your nurse know if you are uncomfortable or are in need of anything so that you can maintain a quiet and comfortable position. It is important that you keep still to ensure accuracy and safety of the procedure. In rare instances, general anesthesia may be necessary. This is determined individually depending on the patient’s health condition (e.g. those who have intolerable back pain with prolonged back lying position, those with certain breathing conditions).

The groin areas will be cleaned with antiseptic solution and a sterile drape will be placed over you. The site(s) will be injected with a local anesthetic. You will feel a stinging and burning sensation at first and then followed by numbness. Sheaths (7 to 10 mm diameter tubes) will be inserted in the groin area into the femoral vein and femoral artery. Longer and narrower catheters will be threaded through these sheaths and will then be positioned in the heart to study the electrical system. This will be done with the guidance of an x-ray machine which will show the positions of the catheter. The room will be darkened most of the time to view the images better. The catheters have the ability to record electrical signals from your heart as well as pace your heart and thus, enable your physicians to study your heart's electrical activity. Your heart will be paced and medications similar to adrenalin will be administered to induce the PVC. You may feel your heart beat very fast. Once the PVC is induced, its source and pathway will be studied and when appropriate, will be ablated through the catheter(s). By ablating the tissues where the PVC is coming from, the tissue essentially is being "burned" so that it will not generate the PVC again. You may or may not feel application of the radiofrequency energy. If you are uncomfortable, don't hesitate to let the nurse know. You will then be observed to see whether the PVC has been eliminated. Your heart will then be challenged with same pacing maneuvers and/or adrenaline-like drug infusion to check whether a satisfactory outcome is reached. In some rare instances, electrical shock may be necessary to convert you to normal rhythm. You will receive deep sedation for this and so you will not be aware when it is done. In addition to sedating medications you will receive heparin, a blood-thinning medication to prevent blood clot formation during the procedure.

The entire procedure typically lasts between 4 to 6 hours but may last longer.

Post-procedure

After the procedure you will be transferred to a stretcher and will be brought into the recovery area. Since you will have received blood thinning medication, the sheaths in the groin area will not be removed until the medication has worn off. This will be determined by your blood clotting time which will be checked periodically. You will be constantly monitored by your nurse and cardiovascular technicians. You will remain strictly on back lying position and will not be able to lift your head or bend the affected leg/s typically for at least another 6 to 8 hours following the procedure. This is to ensure that bleeding from the blood vessels is prevented. Medications for pain will be given and other comfort measures will be instituted. You may be able to take food by mouth once the sheaths are removed. Your family may rejoin at any time that you are deemed ready by your health team.

Typically, patients will stay overnight in the hospital for observation. However, this may vary depending on each individual condition. Your heart medications will be evaluated and changes will be made if necessary. Your physician and/or nurse practitioner/physician assistant will evaluate you the following morning.

Your heart medications will be evaluated and changes will be made if necessary. Typically, you will be put on Aspirin 325mg daily for 2 to 3 months for prevention of blood clot formation following the ablation. Some patients may require blood thinning therapy with warfarin (Coumadin). This will be discussed with you further once the decision is made.

What are the next steps for follow-up care?

The course of the procedure will be explained to you by your physician. Plans for follow-up will be discussed. To evaluate how the ablation procedure affected your condition, you will be asked to wear a Holter monitor in time for

your next evaluation visit in the Electrophysiology Clinic in 2-3 months. The activity restrictions following the ablation usually include: no driving for 24 hours, no lifting, pushing or pulling more than 10 lbs for 72 hours. Unless contraindicated, you may return to work after 72 hours of the procedure. Signs of bleeding, stroke, infection, shortness of breath should be reported to your physician.

What resources are available to me?

You will be given documents (discharge summary) detailing your history, the course of your hospitalization, a list and schedule of the medications you will be taking at home. There is also information on activity restrictions, signs and symptoms to monitor, other pertinent health issues and (emergency) contact information you may need in case you have any questions for your physicians. A copy of the discharge summary will also be sent to the physicians you want the information sent to, usually your primary care physician and your cardiologist.

Contact Persons:

- 1) Mondays to Fridays 8am to 4pm: Electrophysiology Nurses 734-936-8962.
- 2) After business hours: Hospital Paging Operator 734-936-6267 and ask for the Cardiac Electrophysiology Fellow on call.

Disclaimer: This document is for informational purposes only and is not intended to take the place of the care and attention of your personal physician or other professional medical services. Talk with your doctor if you have Questions about individual health concerns or specific treatment options.
CVC control #85

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