Title of Research Study: Prospective Assessment of Premature Ventricular Contractions (PVC) Suppression in Cardiomyopathy (PAPS): A Pilot Study

Sponsor: National Institute of Health / National Heart Lung and Blood Institute
Protocol No:
Investigator Name and Address: Jose Huizar, MD McGuire VA Medical Center 1201 Broad Rock Blvd (111-J3) Richmond, VA 23249

1. Whom should I contact for questions? (Contacts)
If you have any questions, concerns or complaints regarding this study, unexpected reactions, or you are injured and become ill as a result of participation in this study please call AM or PM:

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<thead>
<tr>
<th>Name</th>
<th>Office</th>
<th>Off Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Jose Huizar</td>
<td>(804) 675-5466</td>
<td>(804) 828-7565</td>
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<tr>
<td>Dr. Karoly Kaszala</td>
<td>(804) 675-5466</td>
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<tr>
<td>Dr. Alex Tan</td>
<td>(804) 675-5466</td>
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</tbody>
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If you are unable to reach any of the study staff listed and need immediate medical assistance, please call the VAMC hospital operator at 800-784-8381 and ask for the Emergency Room physician to obtain advice, or call the Emergency Room directly at (804)-675-5527. If you have any questions, concerns or complaints about your rights as a research subject you may contact the McGuire Institutional Review Board (IRB) at (804) 675-5676. The IRB is responsible for reviewing research in humans and making sure that their safety and rights are protected.

2. What is this research study about? (Introduction)
This study involves research comparing two therapies for the treatment of cardiomyopathy (CM) or a weakened heart that is due to extra beats. These extra beats are also called premature ventricular contractions (PVCs). Premature ventricular contractions are commonly associated with heart failure (HF), cardiomyopathy, abnormal heart rhythms and sudden death. The purpose of this research study is to gain a better understanding of how PVCs affect heart function and which treatment strategy is more effective at eliminating the PVCs and possibly improving heart function.
The two treatments arms include a procedure called radio frequency ablation (RFA), or medical therapy with medications called anti arrhythmic drugs (AADs). Both RFA and AADs are currently approved therapies to treat PVCs.

The expected duration of your participation is approximately 15 months. There is a 3-month observation period followed by a 12 month treatment period. The approximate number of research subjects in this study is 30.

3. **What is expected of me? (Procedures)**

At a Screening visit, you will be asked to sign a consent form after all your questions have been answered. We will review your medical history including recent medications and test results. You will have an echocardiogram (ECHO) which is an ultrasound of the heart and a Zio patch will be placed on your chest. The Zio patch is a small monitoring device placed on the skin of your chest. It is worn for 2 weeks to collect data on the amount of PVCs you are having. These tests are standard of care for your heart condition.

At the Baseline visit, you will be randomized to one of the two treatment groups. The random assignment is like the flip of a coin. You will know which treatment group you are in. Information will be collected about your medical history and your current medications. You will be asked to complete a questionnaire about your symptoms. The questionnaire may take 5 – 10 minutes to complete. You will have an electrocardiogram (ECG heart tracing). A cardiac magnetic resonance imaging (CMR) may be obtained if clinically indicated. If due to claustrophobia the need for sedation is required during CMR, the risks of sedation will be discussed at the time of this procedure.

Both treatment arms will follow a 12-week observational period. During the 12-week observational period, you will continue your medical therapy. Between weeks 10 and 12, you will be seen in clinic for an ECG and a second Zio patch to confirm the amount of PVCs you are having. An echocardiogram and a physical exam will be done and you will be asked to complete a questionnaire about your symptoms.

If your PVCs or heart function have improved at the end of the observation period, you may not qualify for the study. If this occurs, we would like to follow you for the next 12 months in a data registry including medications, test results, and clinical visits that your condition may require.

Please indicate your willingness to be followed in this registry by initialing by the “yes” or “no” line.

- □ Yes, I agree ______________ Initials: __________
- □ No, I do not agree: __________ Initials: __________

The ablation procedure will be discussed in detail and you will be asked to sign a separate consent form. Briefly, cardiac ablation is a procedure that is used to scar small areas in your heart that may be involved in your heart rhythm problems. This can prevent the abnormal electrical signals or rhythms from moving through the heart.
The procedure will be done in the Electrophysiology laboratory. You will be given medicine to help you relax during the procedure. You will have an IV (small plastic tube) placed into an arm vein. This may be used to give you fluids or medicines during the procedure. Your provider will also place small stickers on your skin. These are called electrodes and they will be attached to a recording machine to monitor your ECG.

Your doctor will inject a local anesthetic to numb the groin area. Your doctor will then insert catheters (thin flexible tube) into the blood vessel. Your doctor will then thread a flexible wire all the way up to your heart. Your doctor will use X-ray to see and direct the wire to the appropriate position.

Once the catheter(s) is/are in place, your doctor will record the electrical activity of the heart. The catheters can then be used to artificially start your abnormal heart rhythm. Your doctor may start and stop the abnormal heart rhythm in order to study it. You may experience the same feelings you do when the abnormal heart rhythm occurs naturally. You may feel your heart racing or skipping beats.

The ablation procedure may be done to several sites depending on the nature of your abnormal heart rhythm. You may feel some chest, neck, or shoulder discomfort. Medicines can be used during the procedure to prevent and relieve discomfort. After the ablation is done, a follow-up electrical study is used to insure the abnormal heart rhythm has been fixed. At the end of the procedure, the catheter(s) will be removed. Pressure will be applied to the puncture site to prevent bleeding. A pressure dressing may also be applied. You will spend the night in the hospital for monitoring and should go home the next day. This is all standard of care for your condition. In addition, if the PVCs return, a second ablation may be required.

If you randomize to the antiarrhythmic drug (AAD) arm of the study, you will be started on the medication at this time. There are three main medications that are used for PVCs and may be used in the study. They are amiodarone, sotalol, and propafenone. The medication selected for you will depend on your medical history. Depending on the medication that is appropriate for you, hospitalization may be required to monitor your heart rhythm while the medication is started. This could require up to 3 days. If there is a return of PVCs or the initial medication choice fails to control the extra beats, an adjustment to the medication or a change of medication may be required.

You will have clinic follow-up visits at months 1, 3, 6, 9, and 12 following the start of therapy. At each visit, we will ask about any adverse events that you may have had. We will review your medications and your medical history and obtain an ECG. We will ask questions to determine your heart failure status and ask you to complete a questionnaire about how heart failure affects your quality of life.

At months 1, 3, 6, and 12 another Zio patch will be placed to record your heart rhythm for 2 weeks to determine if you still have any PVCs. At months 3, 6, and 12, an echocardiogram will be obtained to determine if your heart function has changed.
4. Will the research benefit me? (Benefits)
You may not receive any benefit from participating in this study; however future patients may benefit from the information from this study.

5. What are my alternatives to being a research subject? (Alternative Therapy)
You do not have to participate in this study to receive treatment for your condition. You could choose to receive either treatment without being in the study.

6. What are my risks? (Risks, Inconveniences, Discomforts)
Participation in this study may involve risks that are unknown at this time. Your condition may stay the same, may improve or may worsen from study participation.

All drugs have the potential to cause allergic reactions including the drugs used in this study. Allergic reactions may be mild to severe, and include the following symptoms: chills, fever, skin rash, hives, itching, watery eyes, swelling, headache, difficulty breathing, difficulty swallowing, severely low blood pressure, organ failure, and death. Serious allergic reactions require immediate medical attention.

Cardiomyopathy and heart failure are often progressive diseases. Participation in the study may not change the natural history of the disease.

If you choose to participate and are randomized to the ablation arm of the study, your risks will be the same as anyone undergoing an ablation. These risks include; but are not limited to:
- wound infection
- irregular heart beats – can cause dizziness, fluttering in the chest, or fainting
- blood pressure problems – can cause dizziness, fainting
- chest pain, heart attack, or stroke
- tear or hole in the heart that may require surgery to treat
- partial lung collapse (pneumothorax) that may require a chest tube or other treatment
- fluid in your lungs or around your heart – may cause your heart not to pump well and require additional treatment or emergency surgery
- shortness of breath
- Return of PVCs with need for a repeat RFA
Death is a possible risk of this procedure, either due to any of the standard risks discussed above or due to potential risks that have not yet been identified.

If you are randomized to be treated with antiarrhythmic drugs, the medications used to treat abnormal heart rhythms also have some risks. All antiarrhythmic drugs have the risk of worsening the heart rhythm which could lead to a life-threatening rhythm and death.
The risks for amiodarone include; but are not limited to:

- allergic reaction
- blistering, peeling, or red skin rash
- blurred vision or other vision changes, eye pain
- chest pain, cough, trouble breathing, lung damage
- dark urine or pale stools, nausea, vomiting. Loss of appetite, stomach pain
- discoloration of skin or yellowing of eyes; decreased liver function
- fast, slow, pounding, or uneven heartbeat (new or worsening)
- lightheadedness, dizziness, or fainting
- numbness, tingling, or burning pain in your hands, arms, legs, or feet
- abnormal thyroid function which may cause weight gain or loss, nervousness, tremors, trouble sleeping, unusual tiredness, hair loss
- pain and swelling of scrotum

You should report these to your doctor right away.

The risks for sotalol include; but are not limited to:

- allergic reaction
- chest pain
- dry mouth, increased thirst, muscle cramps, nausea or vomiting
- fainting, dizziness, lightheadedness, fatigue, headache
- fast, slow, or irregular heart beats
- rapid weight gain, swelling in your hands, feet, or ankles
- trouble breathing, shortness of breath

You should report these to your doctor right away.

The risks for propafenone include; but are not limited to:

- allergic reaction
- chest pain, or worsening of heart rhythm problem
- fever, chills, cough, stuffy or runny nose, sore throat, headache, and body aches
- lightheadedness, dizziness, or fainting
- swelling in your hands, ankles, or feet, weight gain
- trouble breathing, cold sweat, bluish-colored skin
- unexpected heart beat changes, fast or slow heart beat
- unusual bleeding, bruising, or weakness
- confusion, unusual thoughts or behaviors
- nausea, vomiting, constipation
- blurred vision
- ringing in the ears

You should report these to your doctor right away.

7. Will I get paid? (Compensation)
You will not be paid to participate in this study.
8. **Will I have to pay? (Cost of Participation)**

You will **not** have to pay for care received as a subject in a VA research project regardless of whether you are a Veteran or a non-Veteran. If you get a bill for research services contact your study doctor or research nurse. Some Veterans are required to pay co-payments for medical care and services provided by the VA. These co-payment requirements will continue to apply to medical care and services provided by the VA that are **not** part of the study.

There is no guarantee that the medicines you will receive during this study will be continued after the study is completed. If you are a Veteran and are eligible for care you may continue to receive the same medicine after the study **only** if the medicine is routinely available at McGuire VAMC and your physician decides that it is the most appropriate treatment.

9. **Does pregnancy prevent me from participating? (Pregnancy)**

Every effort will be made to have females enter this study. Medically accepted birth control is required to enter this study. This may include, but is not limited to, birth control pills, IUD’s, condoms, diaphragms, implants, being surgically sterile, or being in a post-menopausal state. However, no birth control method completely eliminates the risk of pregnancy. If you are a female and if pregnancy occurs there may be a risk of miscarriage, birth defects, other medical complications or unforeseen risks to yourself or to the unborn baby (i.e. embryo or fetus). If you are a female of childbearing age, you must have a negative pregnancy test before entering the study. We will request a monthly home pregnancy testing if you are randomized to antiarrhythmic drugs. If patient becomes pregnant during the study follow up, we will consider stopping antiarrhythmics and patient will be withdrawn from the study.

10. **What if I get injured? (Research Related Injury)**

In the event of injury resulting from your participation in this research study, McGuire Veterans Affairs Medical Center may or may not provide compensation, depending on applicable federal regulations. A research injury is any injury or illness caused by your participation in the study. In the event of a research injury, necessary medical treatment will be provided to assist your recovery from the injury. For research related injury, the VA must provide necessary medical treatment regardless of whether you are a Veteran or a non-Veteran.

11. **Who Will See My Information? (Confidentiality)**

The confidentiality of your research records will be maintained according to professional standards of confidentiality and VA regulations. Records identifying you may be reviewed by the members of the research team, the representatives of National Institute of Health and their agents of this study, the Research and Development Committee and its sub-committees, accrediting agencies, officials from the Veterans Health Administration, the Office of Research Oversight, the VA Office of the Inspector General, Richmond VAMC, and other federal oversight agencies such as the Food and Drug Administration, Office for Human Research Protections, or as required by law.
The sponsor, institutional review board, and regulatory authorities will have direct access to your entire original records. The information collected and analyzed by the study staff or its representatives will not include your name or personal data that would allow you to be identified. You will only be identified in the study under a study-specific code. The records will be stored in a locked cabinet in a locked office. If information or results of this study are published or presented your identity and study participation will remain anonymous and confidential.

The ways your study doctor will use your study-related health information and the people who may receive it are identified in a separate form entitled, “Authorization for Use & Release of Individually Identifiable Health Information for Veterans Health Administration (VHA) Research”. You will be asked to sign that form to show that you give permission for these uses and sharing of your information. You do not have to sign the authorization form. However, if you do not sign, you will not be able to participate in the study.

A description of this clinical trial will be available on http://www.clinicaltrials.gov, as required by U.S. Law. This Web site will not include information that can identify you. At most, the Web site will include a summary of the results. You can search this Web site at any time. Information published or presented about the results of this study will not identify you.

12. Do I have to participate in this study or can I withdraw from the study? (Voluntary Participation and Withdrawal)

Participation in this study is voluntary and you may refuse to participate without penalty or loss of benefits to which you are otherwise entitled. The study staff will answer any questions you may have about the study. You are free to withdraw your consent and stop participation at any time. If you decide to withdraw from this study, you should contact Dr. Huizar to discuss termination of your participation. It is important that you do this so that Dr. Huizar can withdraw you safely. Stopping will in no way change the quality of care you receive now or in the future at this institution or your right to participate in other studies.

Withdrawal from a research study may have serious effects on your health or welfare. The following withdrawal procedures: ECG, echocardiogram, and Zio patch should be done to assess for return of PVCs or worsening of your heart function. These are necessary for your safety and for orderly termination of your participation in this research study.

If you decide to withdraw from this study, we would like to follow you for the following 12 months in a data registry including medications, test results, and clinical visits that your condition may require.

Please indicate your willingness to be followed in this registry by initialing by the “yes” or “no” line.

□ Yes, I agree ______________ Initials: ______________

□ No, I do not agree: ______________ Initials: ______________
Any significant new findings that develop during the research study that may affect your decision to continue participating will be provided to you as soon as possible.

Your participation in this research study may be ended without your consent for the following reasons:

• If the study doctor believes, for any reason, that it is within your best interest.
• If you develop side effects that are considered dangerous.
• If you refuse to take the medication or fail to return for follow-up as recommended by your study doctor or fail to follow the study doctor’s instructions.
• If you refuse to have tests that are needed to determine whether the study is safe and effective.
• If you require treatment with drugs that are not allowed in this study.
• If you become pregnant.
• If other causes prevent continuation of the clinical research study.
• National Institute of Health (NIH), FDA, and McGuire IRB may also end the study at any time.

13. Date of Consent Form Revision: June 28, 2017
Subject Name: __________________________ Date: __________

Research Study Title: Prospective Assessment of Premature Ventricular Contractions (PVC) Suppression in Cardiomyopathy (PAPS): A Pilot Study

Principal Investigator: Jose Huizar, MD VAMC: Richmond

RESEARCH SUBJECTS' RIGHTS: I have read or have had read to me all of the above.

Dr. Huizar (or an associate) has explained the study to me and answered all of my questions. I have been told of the risks or discomforts and possible benefits of the study. I have been told of other choices of treatment available to me.

I understand that I do not have to take part in this study, and my refusal to participate will involve no penalty or loss of rights to which I am entitled. I may withdraw from this study at any time without penalty or loss of VA or other benefits to which I am entitled. The results of this study may be published, but my records will not be revealed unless required by law. By signing below, I am agreeing to participate in this research study. I will receive a signed copy of this consent form.

Subject's Signature __________________________ Date __________

Signature of Person Obtaining Informed Consent __________________________ Date __________