The Leeds Teaching Hospitals NHS Trust

Ajmaline Provocation Test

Information for patients

Cardio-Respiratory Service

TAKE HEART

Registered Charity No. 1002063

Registered with FUNDRAISING REGULATOR

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Raising funds exclusively for the

Yorkshire Heart Centre

at Leeds General Infirmary,

St James's Hospital

and its units within the

Leeds Teaching Hospitals NHS Trust

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PLEASE READ ABOUT TAKE HEART AT REAR OF THIS BOOKLET

What is an ajmaline provocation test?

An ajmaline provocation test is a specific type of test that we use to diagnose a condition called Brugada syndrome. It is a bit different to most of our other tests because it involves giving you the drug ajmaline and seeing how your heart trace changes.

What is Brugada syndrome?

Brugada syndrome is a relatively rare, but potentially serious, hereditary condition of the heart. It is caused by defects in the tiny pores, or sodium channels, between cells in the heart muscle. These defects can disrupt the normal electrical system of the heart and cause heart rhythm changes (arrhythmias), which in some rare cases can be life threatening.

The diagnosis is made by recognising a specific pattern on your heart tracing. In some patients these changes are obvious and the diagnosis is clear as soon as you've had an ECG. But the ECG changes can be very subtle and, in some people, cannot be seen with a standard ECG. This can make diagnosing Brugada syndrome with a heart tracing alone difficult, and your doctors may use additional tests to help make a diagnosis. This may include a special 'high leads' ECG, an ambulatory ECG (a heart monitor worn for a prolonged period) or an ajmaline provocation test.

What does an ajmaline provocation test involve?

Ajmaline is a medicine which blocks the sodium channels in the heart muscle and allows the classic Brugada pattern to reveal itself if the syndrome is present.

During an ajmaline provocation test, ajmaline is given in a liquid form through a drip (cannula) into a vein. During this time, you are continuously monitored and ECG's are taken at regular intervals to identify any changes. Ajmaline takes effect very quickly when given in this way, it also wears off quickly, so the test does not take a long time to complete but some monitoring afterward is required.

What are the risks and benefits of having the test?

The ajmaline provocation test is safe. However, as with any procedure, there are potential risks that you need to consider.

Benefits of having an ajmaline provocation test:

- Uncovering a diagnosis of Brugada syndrome means that the relevant, precautionary, lifestyle advice can be provided. Following these simple lifestyle measures can reduce the risk of serious arrhythmias associated with the condition.
- Knowing you have a diagnosis of Brugada syndrome allows your medical team to assess your risk related to the condition and make early interventions if there are concerns.
- For safety, first degree relatives would be advised to have screening for the condition if the ajmaline test was found to be positive. This is because Brugada syndrome is an inherited condition of the heart.

Common side effects include:

- Tingling
- Flushing
- Nausea
- Headache or feeling dizzy
- Taste disturbance such as a metallic taste
- Rash (Urticaria)

These side effects are usually very mild and pass very quickly after stopping the test.

Very rare adverse side effects:

- Altered liver function (cholestsatic jaundice)- this may result in yellowing of the skin and eyes as well as itching. This is likely to resolve by itself but may require blood tests to monitor liver function in the weeks after the test.
- Heart rhythm changes – in very rare circumstances, ajmaline can cause dangerous heart rhythm changes at the time of the infusion which may need urgent treatment. We call these heart rhythm changes 'ventricular arrhythmias', and the incidence of this is felt to be around 1 in 1000 worldwide. The test is carried out in a monitored environment with qualified staff who can provide treatment for this if necessary.

Other considerations:

- A positive test result may have implications for first degree relatives, as Brugada syndrome is a hereditary condition
- A positive test needs to be declared to the DVLA and when applying for certain types of insurance. Provided you have no symptoms, currently the DVLA will allow you to drive provided they have been notified.

- Interpretation of the test results can sometimes be challenging and false positives can occur, for this reason the patient history and all other test results are carefully considered when providing a diagnosis

How should I prepare for the test?

- If you take beta blockers, you should stop taking these three days prior to the test. If you have concerns about this ensure you discuss it with your cardiology team
- You should not take any medications which are advised against if you have Brugada syndrome, in the days leading up to your test. It would be best to discuss stopping any regular medications with your cardiology team
- You should fast from food and drinks for two hours prior to the test

What happens during the test?

- The procedure will take place on the cardiology, day-case ward at Leeds General Infirmary. This is ward L14, which is located on E floor of Jubilee wing. You should plan to be in hospital for approximately three hours, occasionally monitoring is needed for a longer period afterward.
- When you arrive, you should check in at the reception desk, here you will be asked to confirm some details and you will be provided with a patient wrist band.
- A cardiac nurse specialist will meet you and take you to a patient bay. The nurse will explain the procedure and discuss the risks and benefits before asking you to sign a consent form.

- Prior to the test you will be provided with a patient gown. You will have your weight checked (this guides the dose of ajmaline given), have your blood pressure checked and have a small tube (cannula) inserted into the back of your hand or arm.
- There will be two specialist nurses performing your test and sometimes a doctor may be present.
- You will have specialist ECG monitoring applied by attaching electrode stickers on the chest, legs and arms. This will be in place for the duration of the test and will be closely monitored for any changes.
- When you are ready and comfortable you will be given small doses of the ajmaline through your cannula, this will happen at one minute intervals until you have reached the maximum dose for your weight.
- This takes approximately 10 minutes but the test may be stopped early if there are changes to your ECG, in this event your nurse will explain why the test has been stopped.
- If Brugada pattern changes are seen the test will be stopped, however the test may also be stopped due to ECG changes which are unrelated to Brugada syndrome
- You will have ECG's recorded every few minutes initially; the final ECG takes place 90 minutes after the test began. This is to check that the effects of the medication have worn off

What happens after the test?

- 30 minutes after the last dose of ajmaline, if you are well, continuous monitoring will be removed and you will be able to have something to eat and drink.

- 90 minutes after the last dose of ajmaline you will have a final ECG recorded to ensure any changes have returned to normal.
- If your final ECG has returned to what is normal for you and you are feeling well, the cannula will be removed from your arm and you will be advised to get dressed into your own clothes.
- If you are well you can drive after the procedure and can go about your usual activities.
- If you suffer any side effects related to the ajmaline provocation test you may be required to stay in hospital for monitoring overnight.
- The specialist nurse performing the test will discuss the results with you on the same day. Occasionally, the outcome may be difficult to interpret and your ECG may require further review by a consultant cardiologist.
- If you have a positive ajmaline provocation test the nurse will explain what this means in relation to why you were having the test. The nurse will also go through some lifestyle advice and give you some written information to take away. You will be given a plan for follow up in one of the consultant clinics and contact numbers for if you have concerns in the meantime.
- If you have a negative result, again the nurse will explain what this means in relation to the reason you were having the test. You will be given a plan for follow up and general recovery advice for when you get home.
- All results will also be communicated by letter.

Contact Information

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Cardiology Admissions team

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Ward L14, E floor, Jubilee Wing, Leeds General Infirmary

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Further Information

Further Information about Brugada syndrome and Ajmaline provocation testing can be found on the following websites:

SADS UK

Website: www.sadsuk.org

Cardiac Risk in the Young (CRY)

Website: www.c-r-y.org.uk

Arrhythmia Alliance

Website: www.heartrhythmcharity.org.ukFurther Information

MEMBERSHIP APPLICATION

Membership of TAKE HEART is open to anyone for a once only fee of £1.50. In return you will receive a regular newsletter keeping you informed of the charity's activities.
YOU CAN ALSO JOIN ONLINE AT: www.takeheart.net

Title: ..... Surname(s): .....

First Names: Member 1: .....

Member 2: .....

Address: .....

.....

..... Postcode: .....

Telephone: ..... Email: .....

Date: .....

An attractive Take Heart badge is available at £1.00. Please indicate the quantity required and add the cost to the Membership fee.

No of Badges required: .....

I enclose a cheque for £ ..... **payable to TAKE HEART.**

DONATION FORM

Donations should be sent to: THE TREASURER, TAKE HEART, 'F' FLOOR, JUBILEE WING, LEEDS GENERAL INFIRMARY, LEEDS LS1 3EX.

I would like to make a donation of £..... to TAKE HEART.

Name: .....

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If you are a UK taxpayer, the Charity can benefit further from your donation.

If you would like further details, please tick this box: ☐

PLEASE MAKE ALL CHEQUES PAYABLE TO TAKE HEART.

DONATIONS ARE ALWAYS WELCOME AND WILL BE ACKNOWLEDGED, AND PUBLISHED IN OUR NEWSLETTER

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THE TREASURER, TAKE HEART, 'F' FLOOR, JUBILEE WING,
LEEDS GENERAL INFIRMARY, LEEDS LS1 3EX. TEL: 0113 392 2888. EMAIL: office@takeheart.net

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WE ARE TAKE HEART

Take Heart is a small, but professional charity, run on a completely voluntary basis, raising funds exclusively for the Yorkshire Heart Centre at Leeds General Infirmary, St James's hospital and its units within The Leeds Teaching Hospitals NHS Trust. We were founded in 1989 by a small number of heart patients wishing to return something for the excellent care received.

From a small beginning, we have raised nearly six million pounds and this has been used to provide comfort and enhance the surroundings for the many thousands who visit the centre every year. We have also made significant progress in supporting staff in their work and improving their working environment.

Some of the major achievements of the charity are the provision of a suite of relatives rooms available free of charge when required, a roof garden providing a peaceful area for patients and relatives, and an internal garden. We provide free bedside television, free telephone calls and free internet for all patients on the heart wards and we have recently provided changing rooms for an additional MRI scanner. Take Heart have refurbished most waiting areas and made sure that patients enjoy comfort of the highest standard. We also fund information booklets (such as the one you are now reading) which are available in all the Heart Centre wards.

Look around and you will see many items provided by Take Heart. One of the schemes we are most proud of is the Take Heart Suite, costing nearly £500,000. This suite has been created to provide a unit for patients to be admitted to instead of a ward for planned procedures such as pacemakers. This increases the number of patients who can be treated in a day and reduces waiting times, In the first year alone over 1,000 patients went through the suite. Patients can relax there in comfort after their procedure before they go home. The staff who work there get so much positive feedback from patients and they love working in the new environment.

Take Heart funds are raised in many ways - through donations - events - sponsorship, and bequests, mainly through its thousands of members and supporters.

We would love you to become a member of Take Heart. As a member, you will receive our newsletter four times a year and if you wish to take part in anything, this is absolutely at your choice. Please note that you will never be bombarded with follow-up mail. You can join by going to our web site **www.takeheart.net** or picking up a form from any ward reception area.

Gina McGawley
Chairman, Take Heart.

Use your SmartPhone to visit our website

FOR MORE INFORMATION CONTACT:
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Your views matter

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