Information to be retained by the patient

Name:

Date of Birth:

Affix Patient Label

CHI:

NHS Golden Jubilee

Electrophysiology (EP) Study Catheter Ablation for Supraventricular Tachycardia (SVT)

What is Supraventricular Tachycardia SVT?

SVT is an abnormal heart rhythm which causes the heart to beat too quickly. It results an abnormal electrical circuit forming in the heart, generally due to an additional electrical connection between different regions of the heart which isn't normally there. SVT can occur at any time and when it does it usually leads to symptoms such as palpitations, feeling of a racing heart, breathlessness, light-headedness, lethargy and fatigue.

Why treat SVT?

Not all patients who have SVT will need treatment. Sometimes the condition may get better by itself, or SVT occurs so infrequently and is so short-lived that it does not cause people any problems at all. However if episodes become more frequent or last a long time it can be unpleasant and disruptive. Occasionally people may have a specific type of SVT known as Wolff-Parkinson-White syndrome (WPW). This can very rarely cause life-threatening heart problems, and treatment for this may be recommended even if people feel well

How is SVT treated?

If you suffer from a prolonged episode of SVT treatment usually requires attending Accident and Emergency and may involve an injection of medicine or even a cardioversion (electric shock under anaesthetic to normalize the heart rhythm). In the longer term if treatment is required this can take the form of medication (pills), or catheter ablation. The choice of treatment will depend on you as an individual, the type of SVT you have, your symptoms, the likelihood of that particular therapy working for you and the risks of the treatment. It is important that you are aware of these options and have discussed them with your doctor and health professionals looking after you.

What is an Electrophysiology (EP) study and Catheter Ablation?

If you have problematic symptoms from SVT despite having tried medication (either because it wasn't effective or caused side effects), you have WPW syndrome, or you have recurrent SVT and the diagnosis is unclear, then your doctor may discuss the option of an EP study and Catheter Ablation with you. This involves putting some plastic tubes into the vein at the top of the leg (or rarely one of the neck veins), and using these to position some very thin, flexible wires (catheters) inside the heart. By using these wires to "pace" the heart at different sites within we can assess for any abnormal electrical conduction and cause you to go into SVT. Once this happens we can then determine exactly what electrical circuit the SVT uses inside the heart, and we can then go on to perform catheter ablation. This involves using energy to apply extremely hot or cold temperatures through the catheters to a critical component of the electrical circuit. The idea is to block conduction and prevent it from causing a problem in the future.

Your doctor has recommended that you may benefit from this procedure.
We hope that reading this information pack will give you the information you need to decide whether to proceed. It is important that you understand and share in decision making about your treatment options.

Important questions to consider are:

• Is this test, treatment or procedure really needed?
• What are the potential benefits and risks?
• What are the possible side effects?
• Are there simpler, safer or alternative treatment options?
• What would happen if I did nothing?

What is the success rate of Catheter Ablation for SVT?

The most common types of SVT are due to abnormal conduction within the electrical junction between the top and bottom chambers of heart (Atrio-Ventricular Nodal Re-entrant Tachycardia or AVNRT) and abnormal conduction between the top and bottom chambers of the heart (Atrio-Ventricular Re-entrant Tachycardia or AVRT). Wolff-Parkinson-White (WPW) syndrome is a type of AVRT. For these conditions generally a cure can be achieved in 90-95 out of every 100 people undergoing the procedure. However other, rarer types of SVT (for example Atrial Tachycardia) do exist, and for these the chance of a successful cure may be lower. Another problem which may occur is that we are unable to get your SVT to start during the EP study. If this happens it is usually not possible to go ahead and treat it safely with catheter ablation at the same sitting as we cannot define the electrical circuit the SVT uses. This is known as being “non-inducible”, and may require you to come back for a repeat procedure at a later date. Your doctor will discuss this with you afterwards if need be.

What does it involve?

You will usually come in to hospital on the day of your procedure. A nurse will complete a check list and you will be given a hospital gown to change into. A specialist doctor will explain the proposed implantation to you and ask you to sign the consent form to confirm that you understand the procedure, proposed risks and benefits and that you agree to go ahead with it. It is important to ask any questions that are important to you about the procedure. EP studies and Catheter Ablation are carried out in a cardiac catheter laboratory (Cath Lab). Staff from the room the procedure will be performed will come and introduce themselves to you and take you into the room. There will be a team of people present and the doctor (Electrophysiologist) will carry out the procedure with the help of physiologists, nurses and a radiographer who will help with the X-ray equipment.

Once in the Cath Lab, the following will happen:

1. You will have adhesive pads attached to help monitor your heart rhythm and an oxygen mask will be fitted. You will have a blood pressure cuff attached and a clip on your ear (or finger) to monitor your oxygen levels during the procedure.

2. You will have a local anaesthetic at the top of the leg and given sedation to make you comfortable. Rarely a general anaesthetic will be given for your procedure. The top of your leg will be cleaned and a clean (sterile) blanket or drape will be used to cover you.

3. The procedure is performed with tubes (sheaths) and wires (catheters) placed in the vein at the top of your leg and positioned in your heart using x-ray guidance.

4. The first part of the procedure is to perform the EP study, and the catheters are placed through the veins into the right-sided filling chamber (the right atrium) and pumping chamber (the right ventricle) of the heart. The team will then pace different parts of the heart to find any areas of abnormal conduction and try and cause you to go into SVT.

If this is successful the doctor will apply heat energy to the area of the heart responsible for your SVT. Sometimes they may use a catheter which can instead deliver very cold temperatures, and sometimes they may find that they need to make a small hole in the thin dividing wall between the right and left filling chambers of the heart to be able to access the part of the heart tissue which is causing the problem. If this is successful this means the SVT can longer conduct.

5. There will be a waiting time of approximately 20-30 minutes after this has been done to ensure that the conduction through this area does not come back. If it does more ablation will be performed. Once the doctor is happy that they have achieved permanent conduction block in the SVT circuit they will remove all the catheters and plastic tubes and press on the top of the leg for a few minutes to stop any bleeding. You will then return to the ward to recover.

How long does it take?

The procedure takes about one to two hours. The length of the procedure depends on a number of factors such as how complex the SVT circuit is and how easy it is to access the critical part of the SVT circuit.

Will I have any pain or discomfort?

You may briefly feel a sharp pain with the local anaesthetic and with the ablation itself. Most patients tolerate the procedure very well but some can find it uncomfortable. Throughout the procedure a nurse will be monitoring you very closely and will be able to give you more sedation or painkillers if needed.

What happens after the procedure?

The tubes at the top of your leg are usually removed in the cath lab and you will go back to the cardiology ward. You will lie flat for two to three hours and the nurses will monitor the top of your leg, blood pressure and heart rhythm. You will then gradually sit up, eat and drink and walk around. It is usual to go home the same day, unless you live very far away from the hospital or if you have a lot of other heart conditions. The doctor and ward team will explain what to do with your medication before you go home, and they will write to your GP and local referring doctor explaining what you had done and the plan for further follow-up and medication.

What happens when I go home?

Please make sure that a friend or relative collects you and takes you home and that someone is with you overnight. Most patients recover very quickly, however it may take a day or two to feel back to normal. You should be able to return to your normal activities as soon as you feel able which will vary from individual to individual. It is best to avoid vigorous activity and heavy lifting for 1 week to allow the top of the leg to heal and reduce the risk of bleeding or a big bruise. It is common to feel extra or missed beats for a few weeks after the procedure and this is normal.

When can I resume driving?

You should not drive for the first two days after the procedure. If you feel well you can then resume driving. There is no formal rule about flying but this should ideally be avoided for the first two days.

Will I be able to stop my medication (pills)?

It may be possible to stop these pills after the procedure; your specialist will advise you and your GP about this.

Are there any risks?

The procedure is usually very successful, but as with all procedures there are some risks. It is important that you understand what these risks are so that you can make a decision whether you want to have the procedure performed. You will have the opportunity to ask any questions before the procedure is undertaken. Overall the risk of any complication is between 3 and 4 %.

Common Complications (1% or greater):

- **Damage to Blood Vessels (Pseudoaneurysm or fistula)** – there is a 1% (one in 100) risk of damaging the artery, which is a blood vessel that runs beside the vein at the top of the leg. If there is damage then this usually heals up without any treatment. Less than one in 500 times you may need surgery or an injection to treat it.
- **Unable to Place Catheters or Perform Ablation** – there is a 5% (five in100) chance we may be unable to place one of the tubes or catheters into the blood vessels or heart, or you are found to have a different type of abnormal heart rhythm which is too difficult to treat on the day. If this is the case we will stop the procedure and discuss the options with you after the procedure.
- **Blood leak round the heart (Tamponade)** – there is a 1% (one in 100) chance of puncturing the heart and blood leaking round the heart. This can heal on its own without any treatment. Occasionally the escaped blood may need to be removed by placing a small drain (tube) under the ribs into the sac which encloses the heart. Very rarely (less than one in 500) you may require surgery to stop the bleeding.

Uncommon Complications (less than 1%):

- **Pacemaker** – there is a less than one in 100 risk that the heart's natural electrical conduction system may be damaged during catheter ablation, causing a condition known as heart block where the heart beats too slowly and may be a risk of stopping completely. In many cases this recovers, but if not you may require treatment which involves implanting a permanent pacemaker system.
- **Stroke or Heart Attack**– there is a one in 500 risk of a blood clot or air bubble causing a stroke or heart attack.
- **Death** – fortunately this is extremely rare. Reported figures round the world suggest this is less than a one in 1000 chance.

Will I need further appointments?

Many people do not need to be reviewed routinely back at clinic. However if this is required you will normally be sent an appointment to be seen in the Arrhythmia Clinic at Glasgow Royal Infirmary a few months after your procedure. Your doctor will discuss this with you after the procedure has been performed

Are there Alternative Treatments?

There are other options for treating SVT that you should talk to your doctor about. These include:

- **No treatment:** Not all SVT requires treatment, and it may get better by itself.
- **Medication:** Pills or tablets can be used to keep you in a normal heart rhythm.
- **Pacemakers:** Medication can sometimes cause your heart rate to go too slowly when you are in a normal rhythm, and although the easiest course of action is simply to reduce the dose or try an alternative sometimes this causes an unacceptable worsening of SVT symptoms. In this scenario a pacemaker can be inserted to speed the rate up and allow you to continue to take the most effective dose of medication.
- **Heart Surgery for SVT:** This approach is extremely rare. It is generally reserved only for patients with the most complex and intractable types of SVT, often after they have had several unsuccessful attempts at catheter ablation.

Useful Contacts

Arrhythmia Nurse Specialist: 07970187324 (M-F 8-4)
Ward 2E: 0141 951 5000 and ask for Ward 2E
Coronary Care Unit (CCU): 0141 951 5202
Golden Jubilee Hospital: 0141 951 5000

Further support and information is available from the:

British Heart Foundation
Lyndon Place
2096 Coventry Road
Sheldon
Birmingham
B26 3YU

0300 330 3322
www.bhf.org

Arrhythmia Alliance
Helpline – 01789 450 787
PO Box 3697
Stratford-Upon-Avon Warwickshire
CV37 8YL
e-mail: info@heartrhythmcharity.org..uk
www.heartrhythmcharity.org.uk

Patient copy

Consent Form
Procedure Specific Patient Agreement

Name:

Date of Birth:

CHI:

NHS Golden Jubilee

Electrophysiology study and Catheter Ablation for Supraventricular Tachycardia (SVT)
A procedure to identify and then treat an abnormal electrical circuit in the heart

STATEMENT OF HEALTH PROFESSIONAL (to be filled in by health professional with appropriate knowledge of proposed procedure)

I have explained the procedure to the patient. In particular, I have explained the intended benefits:

- To restore normal electrical activity in the top heart chambers, and in doing so improve symptoms of SVT such as palpitations, breathlessness, fatigue and dizzyness.

Commonly occurring risks (1% or greater):

- The overall serious complication rate is 3-4%
- Mild bruising is common requiring no intervention.
- Risk of Bleeding round the heart (Tamponade) requiring insertion of a drain is about 1%

Uncommon but more serious risks:

- Major bleeding requiring an operation (one in 200)
- Heart block needing a pacemaker (one in 200 – one in 100)
- Stroke and Heart Attack (one in 500)
- Damage to Blood Vessel (Pseudoaneuryms, fistula) one in 100 (one in 500 requiring an operation)
- The risk of death is less than in **one in 1000** procedures

Any extra procedures which may become necessary during the procedure:

- Blood transfusion (required very infrequently)
- Other procedure (please specify):

I have also discussed what the procedure is likely to involve, the benefits and risks of any available alternative treatments (including no treatment) and any particular concerns of this patient.

The patient has had the information leaflet for this procedure and/or discussed it with a health professional and has had sufficient time to make an informed decision.

I am satisfied that this patient has the capacity to provide his/her consent to the procedure.

This procedure will involve:

General and/or regional anaesthesia ☐ Local anaesthesia ☐ Sedation ☐

Health Professional signature: Name (PRINT):

Job title: Date:

STATEMENT OF INTERPRETER (where appropriate)

I have interpreted the information above to the patient to the best of my ability and in a way in which I believe he/she can understand.

Interpreter signature: Name (PRINT): Date:

Electrophysiology study and Catheter Ablation for Supraventricular Tachycardia (SVT)

STATEMENT OF PATIENT

Please read this form carefully. If your treatment has been planned in advance, you should already have a copy of the patient information leaflet which describes the benefits and risks of the proposed treatment. If not, you will be given a copy now. If you have any further questions, do ask - we are here to help you. You have the right to change your mind at any time, including after you have signed this form.

I agree to the procedure or course of treatment described on this form.

I understand that you cannot give me a guarantee that a particular person will perform the procedure. The person will, however, have appropriate experience.

I understand that I will have the opportunity to discuss the details of anaesthesia with an anaesthetist before the procedure, unless the urgency of my situation prevents this. (This only applies to patients having general or regional anaesthesia).

I understand that any procedure in addition to those described on this form will only be carried out if it is necessary to save my life or to prevent serious harm to my health.

I understand that tissue samples will only be taken in relation to the procedure explained to me. No samples will be taken for quality control, clinical education or research purposes.

I have been told about additional procedures which may become necessary during my treatment. I have listed below any procedures **which I do not wish to be carried out** without further discussion.

I have received a copy of the Consent Form and Patient Information leaflet: Electrophysiology study and Catheter Ablation for Supraventricular Tachycardia which forms part of this document.

Patient signature: Name (PRINT): Date:

A witness should sign below if this patient is unable to sign but has indicated his or her consent. Young people / children may also like a parent to sign here.

Witness signature: Name (PRINT): Date:

CONFIRMATION OF CONSENT (**to be completed by health professional when the patient is admitted for the procedure, if the patient has signed the form in advance**).

On behalf of the team treating the patient, I have confirmed with the patient that they have no further questions and wish the procedure to go ahead.

Health Professional signature: Name (PRINT):

Job title: Date:

Important notes (tick if applicable):

☐ See advance decision to refuse treatment
☐ Patient has withdrawn consent (ask patient to sign/date here)

I (the patient) understand that my information held by the NHS may be used to audit the quality and outcome of clinical treatment including the external validation of hospital notes.

Agree ☐ Disagree ☐ (tick as appropriate)

Patient signature: Name (PRINT): Date:

File copy

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Procedure Specific Patient Agreement

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