

## **What is an EP Study?**

When the heart muscle contracts it does so by an electrical impulse. This impulse, emitted from the Sino atrial node at the top of the heart, travels throughout the heart muscle via a complex electrical network causing the heart to contract or beat. When this impulse is interrupted, delayed or blocked in any way, an abnormal heart rhythm or arrhythmia may be seen. If this happens, an EP study may be required to determine where exactly within the electrical system of the heart the abnormality arises from, to correct this abnormality and allow the heart to return to a normal rhythm.

## **How is an EP study performed?**

An EP study is generally performed as a day surgery and usually lasts around two hours. It is performed by an Electrophysiologist, a cardiologist specializing in the heart's electrical circuit. Local anaesthesia is given and the patient remains conscious for the procedure. A narrow, flexible tube called a catheter is inserted into the patient's blood vessel in either the neck or groin and maneuvered along the various blood vessels to the heart.

Once the catheter reaches the heart, it gathers information about the heart's electrical system. This information helps pinpoint the location of the defective electrical site causing the abnormal rhythm. The Electrophysiologist may then attempt to instigate the arrhythmias under investigation via electrical stimulation. This is quite safe as there are a range of experts and medical equipment close by to ensure the patient's safety and well-being.

Once the location has been determined, the Electrophysiologist may administer medications or electrical impulses in an attempt to destroy the abnormal rhythm and return the heart to a normal rhythm. This is done by radio frequency ablation where high frequency energy is emitted in order to "burn off" the abnormal electrical circuit causing the abnormal rhythm. Radio frequency is quite safe and has been used for decades by surgeons to cut tissue or stop bleeding.

## **Are there any risks?**

The risks of the procedure are minimal and patients are generally allowed to leave hospital that day. Post procedure, however, the patient may be required to remain in hospital for up to six hours to fully ensure their recovery. The success rates of ablations are fairly high and statistically there is a low chance of the abnormal rhythm reoccurring.

## **Is there any preparation for the procedure?**

On the day of the procedure you will need to fast for 6 hours prior to the procedure time. You can take medication with a small amount of water.

You will need to arrange someone to drive you home after the procedure.

You should bring an overnight bag with you (including all your medications).

## **What happens when I arrive at hospital?**

You need to present to the Admissions Department at the hospital. From there you will be taken to either the day procedure area or ward. You will be admitted by a member of the nursing staff and prepared for the procedure. A consent form for the procedure will need to be signed if not already done.

## **What happens after my procedure?**

Your cardiologist will normally discuss the results of the procedure immediately after it is completed, or you may be transferred to the ward and your cardiologist will see you there to discuss the results. Any further instructions will be given to you at that time.

An appointment for follow up will be made on discharge if required.

***Should you have any specific queries or concerns relating to your procedure, please discuss these with your Cardiologist.***