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Patient Information Sheet for Pulmonary Vein Isolation

Pulmonary Vein Isolation (PVI)

As your cardiologist will have explained, the pulmonary vein isolation procedure involves creating bands of electrical isolation between your left atrium in your heart and the pulmonary veins that drain into the left atrium in an attempt to control your atrial fibrillation and restore normal cardiac rhythm.

Anaesthesia for your PVI

You will be given a general anaesthetic for the procedure which typically ranges from 1.5 to 2.5 hours in duration. General Anaesthesia is provided as it enables better immobility during the procedure and has been shown to improve the chance of successful isolation of the veins. This means that you will be unconscious for the period of the procedure and will awaken at the end of the procedure.

Whilst you are anaesthetised your breathing will be controlled by an anaesthetic machine ventilator and an endotracheal tube will be placed whilst you are asleep and removed as you awaken. You will have an intravenous cannula placed in one the veins of your arms prior to commencement of anaesthesia through which intravenous fluids and medications will be administered to support your blood pressure and to maintain your state of anaesthesia. An arterial line, a small cannula placed into a small artery in your wrist, will be placed after you are anaesthetised and is used to monitor blood pressure closely throughout the procedure and to facilitate sampling of blood intermittently to enable monitoring of the levels of anticoagulants, or blood thinning medications, that are administered during the procedure.

An ultrasound study of your heart, a trans-oesophageal echocardiography, will be performed by me during your procedure to assess the function of your heart, to ensure that there are no unexpected clots within the heart and to guide the catheters used by the cardiologist to perform the pulmonary vein isolation. This involves the placement of a probe similar to a gastroscopy probe through your mouth and down your oesophagus into a position behind the heart enabling clear ultrasound images of your heart to be obtained. This will be placed and removed whilst you are anaesthetised. You may have a sore throat for a day or so following this procedure.

At the end of the procedure the anaesthetic medications will cease, you will wake up, the breathing tube will then be removed and you will be monitored closely in the postoperative anaesthesia care unit by our nursing team for 30 to 60 minutes prior to returning to the ward. Most patients have minimal or no pain following the procedure. If you do have pain this will be treated with analgesic, or pain killer, medications. Nausea and Vomiting is very uncommon following this procedure.

For more information about arrhythmia management a useful 7 minute video on treatment of arrhythmias is provided at khanacademy and this presentation by Dr Catanchin from 2016 on PVI.