CENTRAL SYDNEY CARDIOLOGY
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PATIENT INFORMATION SHEET

Transoesophageal Ultrasound (TOE) Examination

This test uses a special ultrasound probe attached to the end of an endoscope (gastroscope) which allows us to examine the heart in greater detail than is possible using an ultrasound probe placed on the outside of the chest as we do in standard cardiac ultrasound examinations (echocardiograms). The most modern probes can image the heart in 3D as well. The test is done in a similar way to a standard gastroscopy but may take a little longer.

The main advantages of this test include being able to see much greater detail as the probe is placed in the oesophagus - the swallowing tube which takes food from the mouth to the stomach. The oesophagus passes right behind the heart and into the stomach which sits under the heart. This is the opposite view to the one we get during a standard echo examination and complements the information we get from it.

Why is it done?

- **Detecting clot or other masses inside the heart.** In atrial fibrillation, the upper chambers, or atria, do not contract, blood can stagnate in parts of the atria especially the atrial appendages and then form small amounts of clot which can be dislodged when normal rhythm and contraction is restored either spontaneously or as the result of drugs or electrical treatment to restore the heart's rhythm (cardioversion).
- **Finding small holes in the heart (patent foramen ovale) in patients with stroke.** Normally a clot which forms and breaks loose in a vein can travel to the right side of the heart and make its way to the lung but in a proportion of the population there is a way for these clots (emboli) to pass through a small hole in the wall between the right and left atria (foramen ovale).
- **Discovering infection inside the heart (endocarditis).** Blood borne infections can lodge in part of the heart causing damage to heart valves and forming abscess cavities inside the heart. The TOE is commonly done in combination with a standard echo to find signs of infection and monitor the progress of treatment of these potentially life-threatening infections.
- **Examination of artificial heart valves and other implanted devices.** Ultrasound cannot penetrate the surface of these materials so we cannot see behind them. This shadow means important information may be missed. The TOE probe can be manipulated to give us a view on both sides of artificial heart valves and devices such as those used to close holes in the heart, repair valves or fill in the left atrial appendage.
- **Assessing disease of the aorta and pericardium.** The aorta (main artery leaving the heart) can be examined in much greater detail using TOE and this can help us find areas of enlargement (aneurysms), splits in the wall (dissection) and clots on the inside of the aorta. Similarly, the two layers of tissue around the heart (pericardium) can be seen in greater detail using TOE.

Preparation and Precautions for the test

If you have had a problem with a gastroscopy previously or have conditions which can affect the risk of the test such as throat or oesophageal problems, you must notify your Cardiologist and also the Cardiologist performing the procedure. We need to know if you have any throat or oesophageal condition such as a hernia, diverticulum, stricture or web.

It is very important that we know what medications are being taken at the time we do the test. Some medications may be withheld and others need to be given. Your doctor will advise which medications this applies to.

Anticoagulants (Warfarin, dabigatran) are continued for the test usually, so too are anti-platelet drugs such as aspirin, clopidogrel or prasugrel.

You need to fast for at least 4 hours before the test. Medications taken before the test should be taken with a sip of water.

How is it done?

This test is done as a day stay procedure in hospital, not the consulting rooms, by a Cardiologist who will explain the procedure before it is done.

The test is usually done under mild sedation in combination with a local anaesthetic spray to the throat.

You will change into a hospital gown, 3 ECG electrodes will be placed on the skin of the chest, a blood pressure cuff on the arm, a finger probe will be placed to measure blood oxygen levels during the procedure as well as a plastic tube in a vein (drip). The test uses a combination of local anaesthetic spray to the throat and a short acting sedative via the vein.

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If a cardioversion is going to be done after the TOE, a short general anaesthetic will be given at the time by an Anaesthetist. The heart will be given a short electrical shock (Direct Current Cardioversion or DCCV), via foil electrode pads placed on the skin of the front and back of the chest, which resets the hearts rhythm.

After the procedure, the local sedation is allowed to wear off. We need to check that the local anaesthetic has worn off by testing your swallowing with a sip of water before you leave the hospital.

You cannot drive after the test on the day it is done.

How do I get the results?

The results of the test are usually given to you at the time and are also sent to your Cardiologist and General Practitioner.