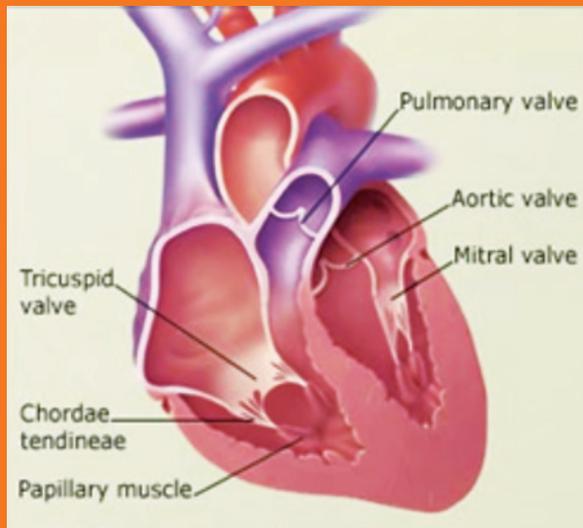


What is a TAVI?

TAVI or Transcatheter Aortic Valve Implantation is a procedure to place an artificial heart valve inside the aortic valve that has been severely stenosed or narrowed. The artificial valve consists of a metal stent which secures the device to hold open your own diseased valve, and valve leaflets that direct the flow of blood out of your heart.



The aortic valve is located between the left ventricle (lower heart pumping chamber) and the aorta, which is the largest artery in the body. Normally, the valve opens to let blood flow out of the heart, and then shuts, to prevent blood flowing backwards. When the valve becomes narrowed, the outflow of blood is obstructed, therefore requiring the heart to work harder to pump blood around the body.

TAVI is an alternative treatment option for patients who are at increased risk for conventional open heart surgery. TAVI can offer several key benefits and prolongs life, which medical therapy cannot do.



SERVICE IS AVAILABLE AT:

Radiology & Nuclear Medicine Department
Mount Elizabeth Novena Hospital
38 Irrawaddy Road, Level 2, Singapore 329563
Tel: (65) 6388 4333 Fax: (65) 6933 0526

www.parkwayhealthradiology.com.sg
BUSINESS REG NO. 32871800M

TRANSCATHETER AORTIC VALVE IMPLANTATION

Transcatheter Aortic Valve Implantation



How should I prepare for the procedure?

You should report to your doctor all medications that you are taking, including herbal supplements, and if you have any allergies, especially to local anaesthetic medications, general anaesthesia or to any contrast materials containing iodine (sometimes referred to as “dye” or “x-ray dye”). You will be instructed not to eat or drink anything for 6 hours before your procedure. Your doctor will tell you which of your regular medications you may take in the morning on the day of the procedure.

Before the procedure, you will undergo routine investigations to evaluate whether TAVI is possible for you. The investigations will also identify any other considerations that need to be addressed for your treatment.

The investigations may include:

- A physical examination
- Blood tests
- Chest Xray
- CT scans
- Electrocardiogram (ECG)
- Angiogram
- Transoesophageal Echocardiogram (TEE)

How is the procedure performed?

- You will be positioned on the examining table.
- Devices to monitor your heart rate and blood pressure will be attached to your body.
- You will be sedated or given general anaesthesia (GA) during the procedure.
- The Anaesthetist will insert an intravenous line into a vein in your neck so that sedative medication can be given to you. Another thin introducer may be inserted into the neck vein that will give access to a temporary pacing wire, which will be inserted later.
- An echocardiogram will be performed.
- The groin areas will be shaved, cleaned with antiseptic solution and covered with a surgical drape.
- Small skin incisions will be made to both groins and sheaths will be inserted into your blood vessels.
- Using X-ray guidance, several catheters will be inserted through the sheaths and into your heart.
- Contrast material will be injected via the catheters and several X-rays will be taken.
- A balloon may be inserted via the sheath and placed within your aortic valve. It will then be inflated to open up the narrowed aortic valve as much as possible so that the valve can be placed inside it.

- Again, using Xray guidance, the Doctor will place the valve in position over your own diseased aortic valve. The valve will start to function as soon as the Doctor begins to release it from the catheter.
- The catheters and sheaths will be removed from your heart and your groins and the small incisions in your groin will be closed using a special closure device.
- A repeat echocardiogram will be performed on you.

What will I experience during the procedure?

You will feel a slight pin prick when the needle is inserted into your vein for the IV line. The arteries have no sensation. Most of the sensation is at the skin incision site which is numbed using local anaesthesia.

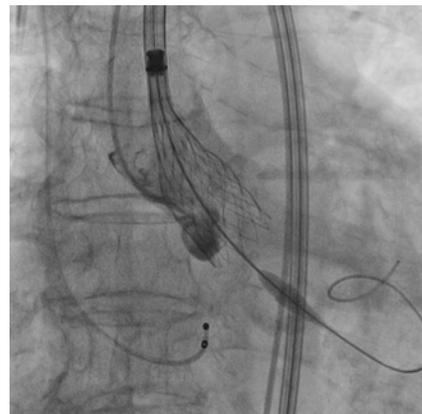
If the case is done with sedation, the IV sedative will make you feel relaxed and sleepy. You will not be awake for the entire procedure, and you will be monitored by the Anaesthetist.

What happens after the procedure?

On completion of the procedure, the sheaths will be removed from both groins. In place will be pressure bandages. The temporary pacing wire in your neck will remain. You will be transferred to the ICU ward for close monitoring. You will remain in the ICU ward until your physician feels that you can be transferred to a regular hospital ward, where you will continue to be monitored until your discharge from the hospital, usually within a few days.

Who interprets the results?

Your primary physician will evaluate your results and arrange your follow-up care.



What are the benefits vs. the risks?

Benefits

- Most will experience immediate symptom relief.
- Improvement in your quality of life which may include increased energy and physical activity.
- Improved survival rate.

Risks

- As with any heart procedure, risks include heart attack, stroke or death.
- Any procedure where the skin is penetrated carries a risk of infection.
- Any procedure that involves a placement of catheter inside a blood vessel carries certain risks which may include damage to the blood vessel, bruising or bleeding at the puncture site/s, and infection.
- There is a slight risk of an allergic reaction as contrast material is injected. However, if you have a history of allergy to contrast, your physician would have advised you to take special medication before the procedure to lessen the risk of an allergic reaction.

Follow-up Care

You will have to take medications as prescribed and have your heart and valve function checked from time to time.

As a precaution, please inform your dentist and other doctors about your heart valve before any dental or medical procedure. If you require a Magnetic Resonance Imaging (MRI) scan, it is very important that you tell the doctor or the MRI technician that you have had a heart valve implanted.

A patient ID card with information about your heart valve will be given to you. It is important that you keep it with you at all times as you may need to show it to the medical personnel when you see a doctor.

When traveling, carry the card with you. As the amount of metal used in the valve is very small, it is usually not enough to set off the metal detectors. However, if it does, simply show security personnel the patient ID card. Passing through a metal detector will not harm your heart valve.