

## **Transcatheter Aortic Valve Implantation (TAVI)**

TAVI (sometimes referred to as TAVR) is a minimally invasive procedure for the treatment of severe aortic stenosis.

The aim of the treatment is to avoid the risks of open-heart surgery particularly in patients with multiple co-morbidities.

You will have been diagnosed with severe aortic stenosis (AS) usually with transthoracic echocardiography.

After clinical assessment, Prof Ruparelia may suggest intervention for this due to the presence of symptoms attributable to the valve.

The aims of aortic valve intervention are to both improve symptoms but also prognosis (long-term outcome).

To determine suitability for TAVI, Prof Ruparelia shall organise some specific investigations including blood tests, lung function tests and also a CT scan to aid in procedural planning and determine risk of intervention.

### **How should I prepare?**

Once a date for your procedure has been organised you will be given specific information with regards to admission times and also your medications.

If you are taking anticoagulants (e.g. warfarin), Prof Ruparelia will usually ask you to stop taking these some days prior to the procedure.

You should not eat or drink for 6 hours prior to your procedure.

Prior to your procedure, you shall also be reviewed by an anaesthetist.

### **What are the risks?**

Prof Ruparelia may suggest TAVI (as opposed to open heart surgery) due to the lower risks associated with this treatment strategy.

The overall risk of TAVI is approximately 5% of complication including vascular complications, damage to the heart, stroke and mortality.

There is a 10% chance of requiring a permanent pacemaker following TAVI.

Prof Ruparelia shall discuss each of these in detail prior to proceeding onto any intervention.

### **The Procedure**

The majority of procedures are performed with valve implantation via the artery at the top of the leg (femoral artery). If this is not possible, Prof Ruparelia will explain another access route and what is involved with this approach.

The majority of procedures performed via the transfemoral route are performed under a local anaesthetic alone. This reduces the risk of the procedure and also facilitates speedy recovery. There is an anaesthetist in the room who can aid in pain relief to ensure maximal comfort and tolerance of the procedure.

Two tubes are inserted into the arteries (and vein) at the top of the leg and an additional tube in the radial artery (wrist). The valve is then advanced up through the artery in the leg into the heart using X-ray guidance.

Once in the desired position, the valve is deployed. Following this the tubes are removed and you are transferred to the ward for ongoing care and recovery.

The procedure takes approximately 1-2 hours.

### **Recovery and post-procedural care**

You will be asked to lie flat in bed for a few hours to aid in the healing of the legs. You can eat and drink immediately after your procedure.

You should be able to sit out of bed within 4-6 hours and walk after 8 hours. Depending on progress, you may be suitable for discharge at 48 hours.

When at home you are able to walk and gradually build up your exercise tolerance and activity. You are not allowed to drive as per DVLA guidelines for 4 weeks following your TAVI.

Prof Ruparelia shall organise a follow up with clinical assessment, ECG and echocardiogram for TAVI valve surveillance following your procedure.

Your TAVI valve will require long-term annual surveillance.