



Operation Information

Transcatheter Mitral Valve Repair

Introduction

Mitral valve is one of the heart valves located between the two left chambers of the heart. It ensures blood flows in a single direction during a normal heartbeat. Mitral regurgitation is a condition in which the mitral valve fails to close completely, resulting in leakage of blood flowing backward. This places an extra burden on the heart and may lead to heart failure, causing symptoms such as shortness of breath, fatigue, irregular heartbeat, and coughing.

Treatment for mitral regurgitation depends on how advanced the condition is and whether it is likely to get worse. In mild cases, treatment may not be necessary but patients need regular medical monitoring. If needed, a physician may prescribe medicines to help make symptoms more manageable. More serious cases may require an open-heart surgery or a less-invasive transcatheter mitral valve repair.

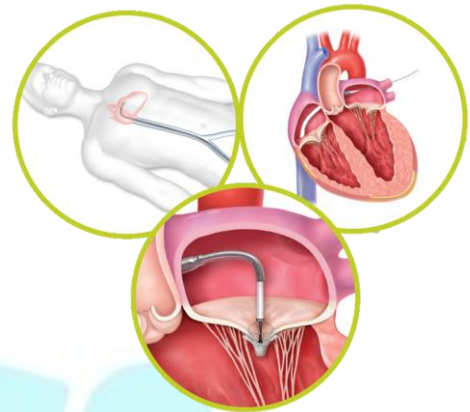
Transcatheter Mitral Valve Repair is a minimally invasive treatment for selected patients with moderate to severe mitral regurgitation. A tiny device is used to clip the mitral valve, allowing the valve to close better.

Outcomes

Procedural success rate exceeds 90%. It is expected that with the reduction in the severity of mitral regurgitation, symptoms associated with mitral regurgitation would significantly reduce, and heart function would be improved.

Procedures

1. The operation is performed under general anaesthesia and imaging-guided.
2. A catheter is introduced into the femoral vein and threaded up through the vessel to reach the heart.
3. A clip is passed through the catheter to the heart.
4. The clip is implanted at the appropriate position on the mitral valve to grasp the valve leaflets.
5. Depending on the situation, more than one clip might be implanted.
6. The catheter is removed at the end of the operation.
7. Pressure is applied to the femoral puncture site to stop bleeding. The wound is covered with a sterile dressing.
8. The operation takes an average of three to four hours.



Source:

https://www.accessdata.fda.gov/cdrh_docs/pdf10/P100009S028C.pdf

Possible Risks and Complications

Overall early (within 30 days) complication rate of 15-19% is primarily related to haemorrhage, while late events are primarily related to underlying heart failure or patient comorbidities.

- Bleeding is common. Blood transfusion may be required.
- Clip detachment is reported at a low rate. Subsequent mitral valve surgery may be required.
- Development of clinically significant mitral stenosis is potential but rare.
- Infective endocarditis is potential but preventable with prophylactic antibiotics and careful dental hygiene.
- Alternative treatment is required if the clip is unable to be implanted.
- Injury to the mitral valve, blood vessels or heart that requires additional treatment.
- The most serious risks include death, stroke and venous thromboembolism.

** The risks listed above are in general terms and the possibility of complications is not exhaustive. Please understand that even though all procedures are carried out with utmost professionalism and care, this does not rule out the possibility of complications arising. In the event of peripheral organ damage or post-operative haemorrhage or vessel perforation, further operations may be required.

Pre-operative Preparations

1. The procedures and possible complications are explained by the doctor and a consent form must be signed prior to the operation.
2. Please inform the doctor and nurse all your medical history, previous surgical operations, current medication and any complication with drug or anaesthesia.
 - Be reminded to inform the doctor for any history of swallowing difficulty and medical intervention to the chest or neck region.
 - Several medications, herbs and supplements influencing coagulation ability need to be withheld a few days before the procedure. Be reminded to inform the doctor if you are taking any substances that may affect blood coagulation.
 - Inform the doctor if you have loose teeth.
3. Several investigations such as blood tests, X-ray, ECG, and CT scan are arranged to confirm the suitability to undergo the procedure.
4. Shaving to the groin area is performed as needed.
5. No food or drink six hours before the operation.
6. Some of your current medications may need to be withheld on the day of the operation. Please take the medications as directed by your doctor.
7. Please change into a surgical gown after removing all belongings including undergarments, dentures, jewellery and contact lenses.
8. Please empty your bladder before the operation.

Post-operative Instructions

General

1. After general anaesthesia, you may:
 - experience discomfort in the throat after tracheal intubation.
 - experience side effects of anaesthesia including feel tired, drowsy, nausea or vomiting. Inform the nurse if symptoms persist or worsen.
2. In the first few hours,
 - ICU care may be required for the 1st day after the operation.
 - You are monitored closely. Your vital signs and the puncture site are often checked.
 - Bed rest and limited movement of the affected leg to prevent bleeding from the puncture site.
 - Diet may be resumed gradually after recovery from general anaesthesia as instructed.
3. Hospital stay may range from one to three days. While in the hospital,
 - Echocardiogram is arranged to assess the function of the clip. Other investigations such as blood tests, X-ray and ECG may also be required.
 - Blood thinners are prescribed. Some of the medications may be the same as what you took before the operation, and some may be different.
 - Keep the groin wound clean and dry. The wound dressing is changed 1 day after the operation. It is normal to experience mild bruising at the site. Notify your nurse if any of the following with the puncture site:
 - Increased swelling or bruising;
 - Discharge with pus; or
 - Worsened numbness of the leg.
 - You are encouraged and assisted to get mobilizing gradually, starting with sitting out of bed a few hours after the operation, and then walking as tolerated.

Advice on Discharge

1. Advice On Home Care
 - Follow your doctor's instructions regarding any medicines you need to take.
 - Avoid any demanding activity for at least 30 days. Do not lift anything heavier than 10 pounds.
 - Walking exercise is encouraged. Walk a little more each day.
 - Following a balanced and low-salt diet places less stress on your heart.
 - Monitor your blood pressure, pulse rate and body weight daily at the same time.
 - Antibiotic prophylaxis with dental procedures is recommended. Please inform your dentist of your Transcatheter Mitral Valve Repair.
2. Immediately consult your doctor or return to hospital for professional attention in the event of
 - Chest pain;
 - Resting heart rate faster than 120 beats per minute or lower than 50 beats per minute, or a new irregular heartbeat;
 - Shortness of breath;
 - Sudden numbness of limbs or face;
 - Increase swelling in your ankles;
 - Weight gain of more than 2 pounds in 24 hours, or more than 5 pounds in one week;
 - Fever with body temperature over 38°C or 100.4°F;
 - Passing black or bright red stool.
3. Any follow-up consultations should be attended as scheduled.

Should there be any enquiries or concerns, please consult the attending doctor.

Under the professional care of the doctor, you will gradually recover. We wish you all the best during your treatment and recovery.

If you have any questions after reading the entire leaflet, please write them down in the spaces provided in order for the doctor to further follow-up.

Compiled by Union Hospital Operating Theatre (OT) Governance Committee

The above information is for reference only, please enquire your physician for details
Our Hospital reserves the RIGHT to amend any information in this leaflet without prior notification

