A ortic stenosis is a type of heart valve disease in which the aortic valve which is located between the left lower heart chamber and the body's main artery (aorta), gets narrowed and doesn't open fully. This reduces the blood flow from the heart to the aorta and to the rest of the body. Senior citizens are at higher risk.

## What is the treatment of Aortic Stenosis?

It is treated with aortic valve replacement (AVR) either transcatheter way known as TAVR/TAVI or else by open heart surgery.

## How does TAVR/ TAVI differ from open-heart surgery?

TAVR/TAVI is routinely done under local anaesthesia from a small incision in the groin there is no need for opening the chest and typically the patient can be discharged 24 to 48 hours after the proce-



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a lower risk of complications compared to open-heart surgery, including a lower risk of stroke and damage to the heart muscle.

• Quicker recovery time: Since TAVI is a less invasive procedure, patients may experience a quicker recovery time. Many patients can return to their normal activities within a few weeks of the procedure.

• Suitability for high-risk patients: TAVI may be an option for patients who are considered at a high-risk for

# An elderly man got successful TAVI at AMRI, Bhubaneswar

Transcatheter Aortic Valve Implantation, one of the most successfully run treatments to treat heart valve disease, is routinely done under local anaesthesia from a small incision in the groin. Here's how a patient got treated with the same successfully

dure. They may resume their routine work after four to seven days.

On the other hand, valve replacement by open heart surgery requires general

anaesthesia, opening up of the chest, prolonged hospital stay and return to routine activities.

#### How safe and effective it is when compared to open heart surgery?

TAVR/ TAVI is more safe, effective, and simple than an open-heart surgery in patients across all risk categories. Transcatheter aortic valve implantation (TAVI) is a minimally invasive procedure used to

treat aortic stenosis, a condition in which the aortic valve becomes narrow and stiff, making it difficult for blood to flow through. TAVI involves the implantation of a new aortic valve using a catheter (thin tube) inserted through a small incision in the leg or chest. There are several potential benefits to TAVI compared to traditional open-heart surgery:

• Minimally invasive: TAVI is a minimally invasive procedure that does not require a large incision in the chest. This can result in a shorter recovery time and fewer complications.

• Reduced risk of complications: TAVI has

open-heart surgery due to their age or other underlying health conditions. Overall, TAVI is a safe and effective treatment option for patients with aortic

stenosis, particularly for those who may be at high risk for complications from traditional open-heart surgery. However, it is important to discuss the risks and benefits of TAVI with a healthcare provider to determine the best treatment option for individual circumstances.

### **Patient's Testimony**

An 83-year-old gentleman was admitted with recurrent fainting (loss of consciousness) and breathlessness. On evaluation he was found to have severe calcific aortic stenosis. Dr Dibya Ranjan Behera, consultant cardiologist at AMRI Hospital Bhubaneswar, who treated him, said, "This is a heart disease where one of the valves, which connect the left ventricle with aorta, was tightly stenosed. In simple words, the exit gate of the left side of heart was almost blocked so that oxygenated blood was unable to go through the major blood pipe at the speed which is required. When such a patient does experience a slightest exertion, blood flow to the brain decreases and he gets a fainting attack which is sometimes deadly. Coronary arteries also get less blood flow and he will experience a chest pain (angina) and even heart attack. The blood in the lungs gets stuck and causes breathlessness.

This is one of the very fatal (deadly) diseases, which should be immediately treated. The treatment is simply replacing the damaged aortic valve called 'Aortic Valve Replacement (AVR)'. This was usually done by open heart surgery.

He also said, "But in many patients like very elderly, with other severe comorbidities, open heart surgery is considered as high risk. Recently, with the advancement of science, this procedure can be done by catheter intervention only, without any need of open-heart surgery. This is called 'Transcatheter Aortic Valve Implantation/Replacement (TAVI / TAVR).' TAVI has revolutionised modern day cardiac intervention in terms of its usefulness and benefits in elderly highrisk patients."

A cardiac team led by Dr Behera did TAVI successfully, using balloon expandable valve in the 83-year-old gentleman. Needless to say, the patient was discharged within two to three days of the procedure. Now, he is able to do all his works without any symptoms.

He said that he was happy that this complex procedure was done at AMRI Hospital, Bhubaneswar. He thanked the entire cardiologist's team for this wonderful achievement. "This definitely has opened a ray of hope for such patients in the state of Odisha," he added.

This initiative is undertaken in the public interest, and for patient education. The information constitutes solely the views of author and shall not be considered to be a substitute for professional medical advice, diagnosis or treatment. Please consult your doctor for further information



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