

For The First Time In Mumbai, Double Valve Re-replacement With Novel Vascular Closure Device Successfully Performed On An Elderly Patient With Heart Valve Disease At Lilavati Hospital



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Double Valve Re-replacement With Novel Vascular Closure Device Successfully Performed On An Elderly Patient With Heart Valve Disease At Lilavati Hospital and Research Centre

- This patient with a history of heart valve disease previously underwent open-heart surgery 14 years ago, during which both his aortic and mitral valves were replaced and required second-time double valve replacements~
- The patient found it difficult to breathe even with slight activity and had trouble sleeping at night, as well as walking, bathing, and going upstairs

Mumbai: A team consisting of Dr Ravinder Singh Rao, Interventional Structural Cardiologist, Dr Vidya Suratkal, Cardiologist, Dr Anand Rao, Cardiologist and Dr Namrata Kothari, Anesthetist, Lilavati Hospital, achieved a remarkable feat by performing Mumbai's first double valve re-replacement in an elderly patient using a transcatheter approach and novel vascular closure device. This cutting-edge procedure resolved the patient's breathlessness without any complications.

Mr Subodh Mishra (Name Changed), a resident of Karnataka was diagnosed with heart valve disease. He previously underwent open-heart surgery 14 years ago, during which both his aortic and mitral valves were replaced. Recently, he experienced breathlessness on minimal exertion. His condition worsened to the point where he struggled to sleep at night, walk, bathe, and climb stairs. The prompt action taken by Lilavati Hospital was crucial in saving the life of this patient.

Dr Vidya Suratkal, Cardiologist at Lilavati Hospital, conducted a 2-D Echo and discovered that the patient's mitral valve was leaking and the aortic valve had narrowed (a condition known as stenosis), which hinders blood flow from the heart to the body. As a result, the blood was going back to the lungs. This led to the filling of the lungs with fluid. The patient required a re-replacement of both the valves. The patient was consulted for a second time for open heart surgery requiring double valve replacements. However, due to previous open-heart surgery, TAVR and TMVR procedure was recommended to the patient to replace the valves. CT scan was done to assess the feasibility of the procedure.

Dr Ravinder Singh Rao, Interventional Structural Cardiologist at Lilavati Hospital performed Transcatheter double valve replacement with cerebral protection and a novel vascular closure device. "Replacing both the valves with a catheter makes the procedure challenging, however, both the valves need to be replaced together, mimicking the results of open heart surgery. The patient gets maximum benefit when both the valves are replaced. A filter was placed in the brain arteries to prevent stroke. A large sheath was placed in the femoral artery (groin vessel). Through the sheath, the aortic valve (TAVR) was replaced. Another sheath was placed in the femoral vein. A septal puncture was done and the mitral valve was replaced successfully (TMVR)."

Dr Ravinder Singh Rao added, "Both valves started functioning immediately. There were no complications and anaesthesia was reversed. The uneventful procedure lasted for two hours. The patient was awake after the procedure and met his family immediately after the procedure. The filter captured a calcium particle and prevented a stroke. The patient spent one day in the ICU and was shifted to the room the next day. For the first time in three months, the patient could sleep comfortably at night and was not feeling any breathlessness. The patient was discharged when in a stable condition. Our experience and skilled expertise help us to make TAVR and TMVR procedures safe for our patients.

Dr Nitin Gokhale Cardiologist and Co-ordinator of Department at Lilavati Hospital said, "TAVR and TMVR are established procedures at present. We focus on offering the right treatment to the right patient in the safest possible manner".

The patient and his relatives expressed their gratitude to the medical team at Lilavati Hospital. "Thanks to the swift care provided with cutting-edge technology and the expertise of the doctors, I can now breathe easily and do my daily activities without any difficulties. I feel fortunate to have been given another chance at life," underscored patient Mr Subodh Mishra.

"At Lilavati Hospital, advanced technology meets compassionate care, especially for patients grappling with intricate conditions like heart valve disease. The Hospital takes pride in performing Mumbai's first double valve replacement with a novel vascular closure device and saving an elderly patient's life. The hospital's adoption of Transcatheter Aortic Valve Replacement (TAVR) has transformed the treatment landscape for many who previously faced limited options. This minimally invasive procedure allows the replacement of malfunctioning aortic valves with remarkable precision, reducing recovery time while enhancing outcomes in high-risk patients. Such advancements highlight our commitment to improve the lives of patients with cutting-edge technology and exceptional medical care," concluded Dr Niraj Uttamani COO, Lilavati Hospital & Research Centre, Mumbai.