

More minimally invasive treatment options available in S'pore for patients with leaky heart valve



The two new procedures at NHCS are for selected leaky heart valve patients who are deemed unsuitable for open heart surgery. ST PHOTO: KUA CHEE SIONG



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SINGAPORE - Patients with leaky heart valve have more minimally invasive options to treat the condition, after two new procedures were introduced at the National Heart Centre Singapore (NHCS).

Also known as tricuspid regurgitation, the heart condition occurs when the valve between the two chambers in the right side of the heart does not close properly, causing blood to leak backwards.

When the regurgitation becomes severe, it can lead to congestion in various organs, such as the liver and the kidney, and affect their functions.

On Wednesday (May 11), Dr Wong Ningyan, a consultant at NHCS' Department of Cardiology, cited studies which showed that 36 per cent of patients with a severe form of the condition will die within one year of diagnosis if the leaky heart valve is not treated.

Only 14 per cent of patients in the study survived for 10 years or more after their diagnosis.

Dr Wong said that patients with the condition were previously given medication to alleviate their symptoms, such as breathlessness or swelling in the legs and belly, and at times underwent surgery to repair or replace the valve.

But many patients, who have a high risk of complications from such a surgical procedure, have to leave their condition largely untreated, he added.

The two new procedures at NHCS - TricValve and TriClip - are for selected leaky heart valve patients who are deemed unsuitable for open heart surgery.

The TricValve procedure involves inserting two bioprosthetic valves through the blood vessel of the patient's leg and placing them close to the chambers in the right side of the heart, said Dr Wong.

The valves then expand in place by themselves, and work to reduce the backflow of blood and pressure on the other organs in the body.

TriClip helps to repair the leaky tricuspid valves by delivering a system of clips to the heart through a vein in the leg, and clipping a portion of the tricuspid valve to reduce the backflow of blood.

Associate Professor Yeo Khung Keong, deputy chief executive (Data Science & Innovation) and senior consultant at NHCS' Department of Cardiology, said that open heart surgery on the tricuspid valve - the gold standard in treating cases of severe tricuspid regurgitation - is not easy.

He added that the patient's heart will often have to be stopped for the procedure.

"Patients are put on heart bypass machines and their sternum is cracked open for surgery. Their recovery time can be anything from a week to a few months," he said, adding that patients will usually need to be admitted to the intensive care unit (ICU) as well.

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Recovery could be even longer if there are complications, said Prof Yeo, who is the lead physician for TricValve and TriClip procedures.

But with the new procedures, patients may be discharged in three days if they do not have any underlying conditions.

They may also not require time in ICU.

Dr Wong said the new procedures will be offered to patients who have severe symptomatic tricuspid regurgitation, and are at high risk of developing complications.

The procedures will take place following discussion among specialists from multiple disciplines, he added.

Prof Yeo said he expects about 10 to 15 patients to benefit from the new procedures every year.

One patient who had the TricValve procedure is Mr Tan Boon Chwee, a 52-year-old civil servant. He was diagnosed with severe tricuspid regurgitation in 2020.

At the time, he experienced shortness of breath, leg swelling and abdominal bloatedness.

"I couldn't manage a 10m walk from my home to the carpark, and inside the car I had to catch my breath. I tired easily, but despite sleeping early I'd still feel tired the next day," he said.

However, because he also suffers from an underlying condition known as Marfan syndrome and had several surgeries for the disorder which affects connective tissues, he was considered to be at too high a risk of complications for surgery on his tricuspid valve.

"The quality of my life was (horrible). I felt hopeless," he said.

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In June last year, he was able to opt for TricValve, and had his operation in December.

Mr Tan said: "I'm feeling much better now. It's been about five months since the operation, and I can feel my energy returning.

"I feel less bloated, my leg swelling is much better, and most of all I don't feel breathless."

"I've been given a new lease of life," he added.