

Media Advisory

National Heart Centre's achievements further endorses its status as a leading referral centre for cardiology

May 2006 – The National Heart Centre (NHC) in Singapore, one of the five National Specialty Centres within SingHealth, has established itself as the main referral centre for cardiology in Singapore and the Asean region. It sees 80,000 outpatients annually and performs over 2,000 coronary angioplasties each year. It is the only centre which performs heart and lung transplant in Singapore.

NHC is the first heart hospital in Asia to be accredited with the Joint Commission International (JCI) accreditation. The accreditation is an endorsement of the institution's commitment to improving the way care is delivered. It is a highly sought accreditation internationally as it is a stamp of approval for the quality of care provided by the institution.

Clinical outcomes of international standards

1. Coronary artery bypass grafting (CABG)

CABG is the most common heart operation and about six to eight hundred cases are performed annually at NHC. Excellent long term graft patency and survival is achieved. With the development of medical therapy, angioplasty and stenting, patients referred for CABG now are more high-risks and have more co-morbidity such as diabetes, hypertension, renal impairment, previous strokes and poorer heart function.

The results of CABG surgery performed at NHC have consistently been comparable with international benchmarks for the safety and success. Mortality rate at NHC for the high-risk coronary artery bypass surgery is below 2%, comparable to the international standards reported by The Society of Thoracic Surgeons, a national database in United States

2. Percutaneous Transluminal Coronary Angioplasty (PTCA)

PTCA, or Coronary Angioplasty, is a minimally invasive non-surgical procedure that is used to open narrowed arteries. With better operators' experience and improvement in equipment, the doctors at NHC is able to carry out multi-vessel angioplasty procedures.

NHC has one of the highest volumes and experience in coronary angioplasty, for a single centre, in Asia. We perform over 2,000 coronary angioplasties per year. About 250 of these are performed in an emergency setting for heart attack. The overall mortality rate is only 0.6% (0.2% for elective PTCA), which is much lower than the 1% figure used internationally.

Another significant achievement is NHC's median door-to-balloon time of less than 115 mins, lower than the recommended guidelines by the American College of Cardiology/American Heart Association of 120 mins. Door-to-balloon times are defined as the time interval between the arrival in the emergency department to first angioplasty balloon inflation for patients with ongoing heart attack.

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Leader in cardiac care

1. Valve Repair vs Valve Replacement

As the incidence of rheumatic heart disease declines with economic development, more degenerative valvular problems are being seen. Reduced operative mortality has allowed these patients to be referred for surgery at earlier stage of the disease. More patients are now favouring the use of bioprosthetic valves because of a better quality of life and the avoidance of complications of anticoagulation.

The superior result of mitral valve repair over replacement has given great impetus to perfecting the techniques of mitral valve repair. The mitral valve is one of the four valves of the heart. It lies between the left atrium and left ventricle, ensuring that blood flows from the atrium to the ventricle and not the other way. Over 90% of degenerative mitral valves can be repaired in National Heart Centre of Singapore (NHC) with minimal mortality and morbidity. NHC is also involved in the development of autologous pericardial valve using the SPAC technique, which may be clinically tested at a future time.

2. Dor procedure for heart failure patients

NHC has achieved dramatic results for Dor surgery performed on its heart failure patients. Twelve patients survived the surgery and experience improved quality of life after the operation. This procedure was named after its founder Dr Vincent Dor and it involves reconstructing the shape and size of the heart.

Its youngest patient is a 36-year-old musician who suffered two heart-attacks and was in severe heart failure with an ejection fraction (EF) which describes the percentage of blood pumped out of the filled ventricle. A normal ejection fraction is 50% to 75%. The patient was in persistent heart failure and his only option was a heart transplant. It took four to six months of intense medical therapy to stabilise his condition and prepare him for surgery. Two bypass grafts and the Dor procedure were done and within two weeks, he was discharged from the hospital. This patient has since returned to work and is doing well.

The oldest patient who underwent the Dor procedure is a 70-year-old Malay female who had suffered from a heart attack. She was admitted into NHC twice for congestive heart failure within a month. Her ejection fraction was 20% and her heart was severely enlarged. She underwent three bypass grafts and the Dor procedure and has now recovered fully. She has had no readmissions for heart failure to date and is now able to resume her usual routine activities without feeling breathless.

The Dor procedure has significantly improved the quality of the lives of the heart failure patients who are on the transplant waiting list and those whose heart failure is not yet severe enough to be put on the waiting list.

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About National Heart Centre

National Heart Centre (NHC), the first Joint Commission International (JCI) accredited heart hospital outside USA, is the national referral centre for cardiovascular disease in Singapore. It has 185 dedicated inpatient beds and a multi-disciplinary team of over 50 heart and thoracic specialists to manage an annual workload of over 80,000 outpatients, 1,000 cardiac surgery and 2,000 coronary angioplasty cases. With the depth of the expertise in different fields such as coronary intervention, electrophysiology, echocardiography, nuclear imaging and cardiac rehabilitation, patients can be assured of obtaining the best appropriate care for their underlying heart disease.

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