ON SETTING UP A HEART TRANSPLANT PROGRAMME AT RAMATHIBODI HOSPITAL, BANGKOK, THAILAND

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The first heart transplant (HTx) programmes in Asia began in Taiwan and Thailand in 1987. Since then, HTx has been accepted as a standard treatment for end-stage heart failure in Thailand. Currently, there are at least 10 Asian countries that have experience in HTx operation but few Asian countries (Taiwan, Korea and Japan) had more than 30 cases annually. The total number of HTx in Thailand during 2012–2017 ranged from 12–24 cases. There are five institutions in Bangkok that perform cardiac transplantation; namely, Chulalongkorn Hospital, Siriraj Hospital, Rajvithi Hospital, Burungrad Hospital and, in 2017, Ramathibodi Hospital started a new HTx programme after approximately 2 years of preparation. Our first case was a young male patient with myocarditis and cardiogenic shock requiring extracorporeal membrane oxygenator (ECMO) support. The patient survived the HTx despite a complicated clinical course. During 2017–2018, our centre performed 5 cardiac transplantation (2 out of 5 had ECMO support before transplantation, 1 was a paediatric patient) with zero in-hospital mortality. We are now in the very early stage of starting the HTx programme and there is still a lot of room for improvement in our programme.

REFERENCES

UPDATES ON CARDIAC TRANSPLANT AND LVAD IMPLANTS ACROSS THE UK AND EUROPE

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Whilst there has recently been unprecedented growth in heart transplants (HTx) in North America, the number has been static or falling in most European countries. These have resulted in significant increases in the waiting times.

In the UK, an Urgent Heart Allocation Scheme has been in existence since 2001. With a growing number of heart failure patients on temporary mechanical circulatory support (MCS) devices, a Super Urgent category was introduced in 2016. So far, ~15% of HTx in the UK are performed under this new category and the median waiting time has been ~7 days. Post-transplant 30 day survival has been reassuring. However, ongoing monitoring will be required to ensure effectiveness.

The other major development has been donation after circulatory death (DCD) HTx. To date, ~100 DCD HTx have been performed worldwide, with 70 of these being in the UK.

Growing waiting lists have led to increased implantation of bridge-to-transplant left ventricular assist devices (LVAD). However, the extended waiting times for donor hearts in stable patients mean that patients being bridged are effectively having destination therapy by default.

Whilst destination therapy is approved in some countries, the available evidence has not been accepted by other countries. The Swedish Evaluation of LVAD as Permanent Treatment in End-stage Heart Failure (SweVAD) is a prospective randomised study comparing LVAD therapy with optimal medical therapy. Recruitment commenced in 2016 with the aim of randomising 74 patients.

Outcomes and adverse events associated with implantable MCS will further improve as new devices using novel pumping mechanisms with lower shear stress are in development to address inherent limitations of current devices.

OPTIMISING HEART FAILURE CARE BY MULTI-DISCIPLINARY HEART FAILURE CLINIC (MHFC)

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According to the Hospital Authority’s Statistical Report 2015–2016, heart failure (HF) was the leading cause of admission in Cardiology. The total number of HF admissions have increased by 14% in 10 years. Moreover, increasing frequency of acute decompensated HF has resulted in higher rates of hospitalisation and mortality. It is recognised that the 30 day readmission rate can be 25%–50% following hospital discharge. Current guideline recommends that HF patients should be managed by a multi-disciplinary care team to reduce HF-related hospitalisation. In fact, the establishment of multi-disciplinary heart failure clinics have been associated with reduction in rates of readmission and all-cause mortality.

In June 2017, we launched the Multi-disciplinary Heart Failure Clinic (MHFC) at Prince of Wales Hospital, Shatin, with two dedicated clinic sessions per week. Self-ambulatory patients in HF with reduced ejection fraction or HFREF (EF ≤40%) and New York Heart Association (NYHA) class II-IV who had recent HF-related hospitalisation were followed. Education on self-monitoring of symptoms, fluid restriction and medication adherence were done by a dedicated HF nurse. Subsequent optimisation of guideline-directed medical therapy was done by the cardiologist. At 6 month follow-up, NYHA class improved from I to II in the majority of patients (figure 1; p=0.029). In addition, the 30 day readmission rate decreased from 68% to 12% (figure 2; p<0.05).

In conclusion, the establishment of MHFC can improve HF-related hospitalisation and patients’ symptomatology. Our local study echoes the findings of a recent meta-analysis.

REFERENCES


Self-management (SM) of a left ventricular assist device (LVAD) is a complex process and arduous to many patients. Thus, support from a family caregiver and a nurse is required to achieve the ultimate treatment goal for implanting an LVAD – to increase quantity and quality of life.1 A mobile phone application (VAD Care App version 1.0®) was invented to simplify the LVAD SM process and empower patient’s engagement in SM.2 The purposes of this presentation are the following: (1) illustrate the main components of the app; (2) describe the app-directed and nurse-supported LVAD SM intervention; and (3) present the results of the feasibility study as well as preliminary results of an ongoing pilot clinical trial. Future studies, app designs (versions 2.0 and 3.0), and implications for advancing the LVAD SM science will be discussed.3 Conference participants are encouraged to engage in a dialogue about the applicability of the app to other implantable devices (e.g. cardiac resynchronisation therapy) and complex conditions (e.g. pulmonary hypertension) within the context of healthcare delivery and culture in Asia.

REFERENCES


Prior to establishment of the heart failure (HF) nurse clinic at Queen Elizabeth Hospital (QEH), Hong Kong in 2003, high rates of hospital readmission were seen in HF patients. Despite shortage of manpower and resources in the Hong Kong public healthcare sector, the clinic has over the years improved patient outcomes including functional capacity and rates of hospital readmission.

Initially, cardiac nurses contributed to promoting patients’ health seeking behaviour through education. By 2012, the clinic provided protocol-guided titration of medications to achieve optimal dosing of medications. The HF clinic nurses would individually titrate and maximise medical therapy according to the pre-set protocol endorsed by cardiologists.1 HF patients were closely followed, particularly for those referred from Outpatient Clinics or recently discharged from hospital requiring medication adjustment and education.

On average, HF patients were followed up every 2–4 weeks, and sometimes even weekly for close monitoring. In contrast, follow-up at Outpatient Clinics occurred at 3- to 4-month intervals. Apart from education and medication titration, cardiac nurses of the HF clinic also helped to identify and refer difficult-to-manage patients for advanced treatment such as device therapy.

Nurses at the HF clinic have a high degree of autonomy, not only in titrating medication according to protocol but also in customising care plan for patients. The QEH HF nurse clinic has been successful in reducing HF patients’ length of hospitalisation after starting care and follow-up at the multidisciplinary heart failure clinic.