



HEALTHY HEART

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Price : ₹ 5/-

Honorary Editor :
Dr. Milan Chag



Dear Friends,
CIMS Heart Team did the first Heart Transplant of Gujarat on December 19, 2016 and created the history. Advanced heart failure is a major health burden in the most of countries throughout the world. In spite of great advancement in drug and device therapy for HFrEF (Heart Failure with Reduced Ejection Fraction), prognosis remains poor and in stage D heart failure. Mortality of patients needing hospitalization for heart failure is 30% at 1 year and 50% at 5 years. Transplant is a viable option in a suitable patient and as CIMS has the team and infrastructure to do this. I am reviewing some basic aspects and long-term outcome.

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Interventional Cardiologist

Heart Failure and Heart Transplant Cardiologist

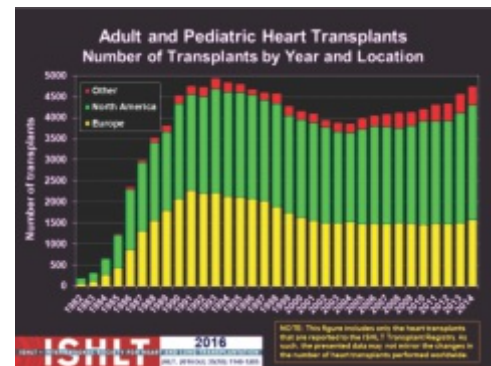
Heart Transplant: Who Needs It?

Introduction

Heart failure (HF) is a modern epidemic affecting 26 million individuals worldwide. In spite of optimum medical therapy, prognosis is poor. 20% of patients need readmission within one month and 50% patients need readmission within 6 months after initial hospitalization for heart failure. Even mortality of these hospitalized patients is dismal after discharge: one third of them do not survive beyond one year and 50% do not survive beyond five years. In the most advanced phase of HF, heart transplantation has been the only means of improving the quality of life and survival in these patients. South African Christiaan Barnard performed the first human-to-human heart transplant on December 3, 1967 and a new era began. With the advances in immunosuppression therapy, 1 year survival after cardiac transplantation approaches 90%, with 50% of patients surviving more than 10 years.

On an average, 5,000 heart transplants are

done yearly world-wide. Majority of them are in North America and Europe. Till date around 1,20,000 heart transplants have been performed. In India, approximately 250 heart transplants are done every year with rapidly increasing number in last 1-2 years. Heart transplantation is a treatment modality and that requires a dedicated team of specialists, consisting of cardiologists, cardiothoracic surgeons, cardiac anesthesiologists, infectious disease specialists, pulmonologists, nephrologists, immunologists, pathologists, and specialist from almost all disciplines of medicine apart from specialized nurses, transplant coordinators and social workers.



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Selection Criteria for

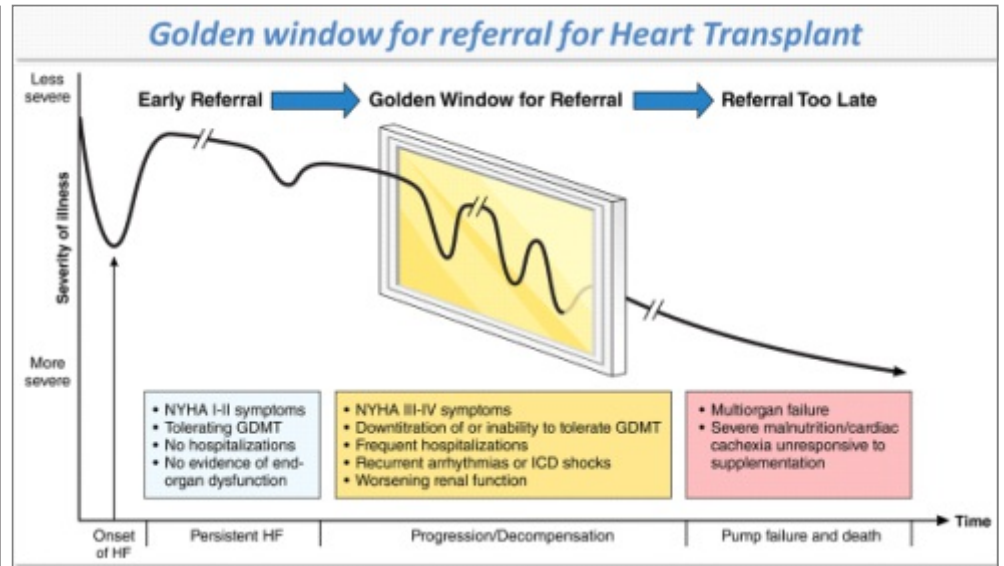
Cardiac Transplantation:

Any reversible or treatable cause should be ruled out before considering heart transplant in any patient with severe heart failure. Medical therapy needs to be optimized. In a patient with ischemic or valvular heart disease, this involves assessment of myocardial viability and/or severity of valvular disease to determine whether there are percutaneous or surgical options. Treatable congenital heart diseases, arrhythmias, reversible acute myocarditis, and metabolic and toxic agent exposure should be ruled out. Screening for transplantation involves an extensive evaluation to exclude significant comorbidities that can increase either the short-term perioperative risk or long-term survival.

The aim is to pick up the golden window for referral for heart transplant. Patients can be managed medically for variable duration with optimum treatment. Gradually, their symptoms will worsen, will need repeated admissions for decompensated heart failure, renal function will worsen, SBP will tend to stay on lower side and that will compel us to reduce the doses of the very drugs which were keeping the patients alive. Recurrent arrhythmias will invite frequent ICD shocks and worsen the situation. This is the time when patient should not wait further as they may ultimately develop multi-organ failure and cardiac cachexia will worsen further.

Indications for HT:

- (1) Cardiogenic shock requiring either continuous intravenous inotropic support or Mechanical Circulatory



Support (MCS) with an intraaortic balloon pump counterpulsation device or MCS

- (2) Persistent NYHA class IV congestive Heart Failure symptoms refractory to maximal medical therapy (Peak VO₂ <12 mL/kg/min)
- (3) Intractable or severe anginal symptoms in patients with coronary artery disease not amenable to percutaneous or surgical revascularization
- (4) Intractable life-threatening arrhythmias unresponsive to medical therapy, catheter ablation, and/or implantation of intracardiac defibrillator.
- (4) Complex CHD with failed surgical palliation or not amenable to surgical palliation at acceptable risk.

Some conditions which can lead to this situation are:

- (1) Ischemic and non-ischemic cardiomyopathy,
- (2) Valvular Disease,
- (3) Congenital Heart Disease
- (4) Myocarditis, Infiltrative Myocardial Disease

Contraindications, comorbidities and their implications for consideration for Heart Transplant (HTx):

Contraindications to transplantation continue to evolve, with centers expanding criteria for acceptance.

- (1) Age: > 70 years (ISHLT); In India, age > 60-65-year may be considered as relative contraindication.
- (2) Obesity: BMI > 35 kg/m²- a contraindication
- (3) Systemic illness with a life expectancy <2 years despite HTx, including active or recent solid organ or blood malignancy within 5 y (e.g. leukemia, low-grade neoplasms of prostate with persistently elevated prostate-specific antigen) is a contraindication for heart Transplant.
- (4) DM with end organ damage or HbA1c >7.5: relative contraindication.
- (5) Renal function: eGFR < 30 ml / min / 1.73 m²: a relative contra-indication for HT alone.
- (6) Severe, symptomatic Cerebrovascular disease: absolute contraindication; severe peripheral vascular disease: relative contraindication.



- (7) Frailty (unintentional weight loss of >4.5 kg within the past year, muscle loss, fatigue, slow walking speed, and low levels of physical activity) may be considered high risk.
- (8) HIV: Selected HIV-positive candidates may be considered for HT if they have no active opportunistic infections, and are clinically stable on combination antiretroviral therapy (cART) for >3 months, if their HIV RNA is undetectable, and if they have CD4 counts >200 cells/ μ l for >3 months. Due to availability of very effective drug therapy, HIV infection is no longer considered an absolute contraindication to solid-organ transplant.
- (9) Fixed pulmonary hypertension: Pulmonary artery systolic pressure >60 mm Hg, mean trans pulmonary gradient >15 mm Hg, Pulmonary vascular resistance >6 Wood units
- (10) Systemic lupus erythematosus, sarcoid, or amyloidosis that has multi system involvement and is still active are relative contraindications.
- (11) Irreversible hepatic dysfunction is a contraindication for isolated heart Tx.
- (12) Patient with significant obstructive pulmonary disease (FEV1 <1 L/min) will need combined heart and lung Tx
- (13) Active mental illness or psychosocial instability: contraindication
- (14) Drug, tobacco, or alcohol abuse within 6 months : relative contraindication.

Donor:

Donor hearts come from someone who is brain dead but still on life support. All other attempts of saving their life have failed. A donor is a person under the age of 55 years with little or no history of heart disease or

trauma to chest. A donor heart can be kept outside the body for only 4 to 5 hours after harvesting it. After checking the donor card (willingness of deceased) and taking consent from family, the heart is removed by a specialized team of cardiac surgeons, preserved in specialized solution at very low temperature of 0 to 3-degree centigrade. ABO blood type needs to be compatible between donor and recipient. Once harvested, donor heart is transplanted in recipient as soon as possible, preferably within 3 to 5 hours.

Immunosuppressive and other Therapy:

All transplant recipient patients will need lifelong immunosuppressive therapy and in majority, it is Mycophenolate mofetil and Tacrolimus. Steroids are usually withdrawn by 6 to 12 months as per institutional protocols. Co-trimoxazole and Valgancyclovir are given for the first 6 months. To prevent atherosclerotic coronary artery disease, statins are given to all recipients.

Immunosuppressive drug therapy

Induction Therapy (perioperatively and early post-transplant):

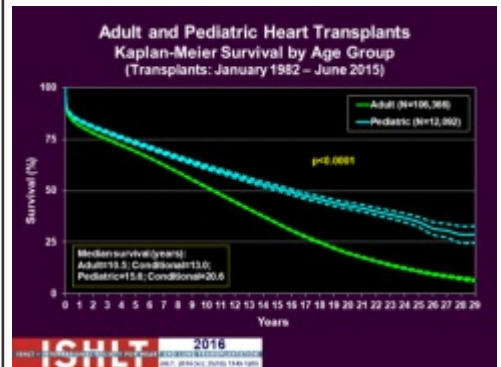
- Polyclonal : antithymocyte globulin.
- Monoclonal : basiliximab (anti-CD25), alemtuzumab (anti-CD52).

Maintenance Therapy

- Calcineurin inhibitor : tacrolimus, ciclosporin.
- Antimetabolite : mycophenolate mofetil, mycophenolic acid, azathioprine.
- Corticosteroid : prednisolone, prednisone, methylprednisolone.
- Mammalian target of rapamycin inhibitor : sirolimus, everolimus.

Long-term survival:

With improvement in understanding and knowledge of donor management before procurement of heart, reduction in ischemic time, better immunosuppressive therapy and good follow up, long term survival has improved: it is even better among pediatric Tx compared to adult heart Tx. Average 5-year and 10-year survival is approximately 75 and 50% respectively.



References:

- *Selection of Cardiac Transplantation Candidates in 2010.* Donna Mancini, MD; Katherine Lietz, MD, PhD. *Circulation.* 2010; 122:173-183
- *Heart transplantation in India—are we there yet?* Komarakshi Balakrishnan. *Indian Journal of Thoracic and Cardiovascular Surgery* (2020) August 36 (Suppl 2): S159–S165
- *The 2016 International Society for Heart Lung Transplantation listing criteria for heart transplantation: A 10-year update.* *The Journal of Heart and Lung Transplantation*, Vol 35, No 1, January 2016



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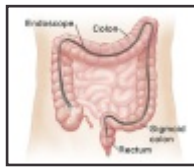
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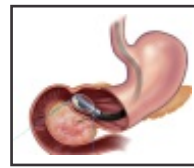
Upper GI Endoscopy



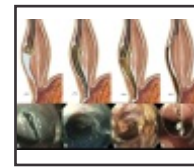
Lower GI Endoscopy



ERCP



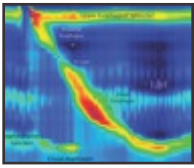
Endoscopic Ultrasound



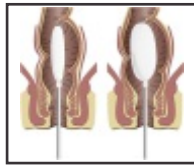
Per Oral Endoscopic Myotomy (POEM)



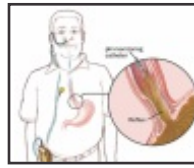
Capsule Endoscopy



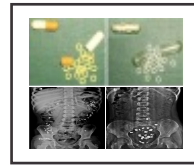
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