

## **Pediatric Heart Transplant Selection Criteria**

### **Policy**

To identify appropriate candidates for heart transplant. Generally heart transplantation is indicated in the pediatric population suffering from irreversible heart failure.

### **Indications**

#### **Absolute Selection Criteria**

1. Gestational age > 34 weeks and birth weight > 2.0 Kg
2. Stable metabolic and hemodynamic status while receiving PGE-1 and other supportive measures (cardiac inotropic drugs, mechanical ventilation, parenteral nutrition, etc.)
3. Psychosocial evaluation:
  - A) The candidate should reside within 45 minutes traveling time from MUSC for a minimum of two months after transplantation
  - B) Supportive family structure
  - C) The candidate's family should be capable of long-term supportive care of the child and be able to support the exceptional needs of the child
4. No clinical suspicion of sepsis
5. Normal neurological evaluation
6. Acceptable renal function:
  - A) If BUN >30 and creatinine >1.5, pediatric nephrology consultation to exclude gross renal abnormalities
  - B) Abdominal ultrasound study showing no significant renal malformations
7. Normal or reversible function of all other organ systems
8. Phenotypically normal or identifiable syndrome in which expected quality of life and lifespan is acceptable (e.g. Down Syndrome, DiGeorge Syndrome)
9. End-stage heart failure (New York Heart Association Class III-IV) due to myocardial or congenital disease not amenable to conventional medical or surgical therapy
10. Pulmonary vascular resistance index < 6 woods units or transpulmonary gradient < 15 mmHg
11. Absence of uncontrolled infection or pre-existing uncontrolled malignancy
12. Absence of recent pulmonary infarct
13. Normal function or reversible dysfunction of all extra cardiac organ systems kidneys, liver, lung, and central nervous system

#### **Selection Criteria**

1. Sound psychological make-up and adequate family or caregiver support
2. Ability of caregiver to comply with medication and follow-up regimens
3. Reasonable nutritional status
4. Congenital birth defects are evaluated individually as they impact upon long-term immunosuppression, infection and rehabilitation potential

## **Contraindications**

### **Absolute Exclusion Criteria**

1. Marked prematurity and low birth weight
2. Persistent acidosis with pH below 7.1
3. Abnormal neurological evaluation suggesting poor long term prognosis:
  - A) History of blood sugar below 20 mg% for more than 30 minutes
  - B) Gross central nervous system anomaly with a significantly abnormal EEG
4. Abnormal renal function:
  - A) Gross urinary tract anomaly
  - B) Persistent and/or markedly elevated BUN and creatinine
5. Significant genetic or congenital syndrome in which expected quality of life and lifespan is poor
6. Positive drug screen during transplant evaluation
7. Untreated or untreatable congenital or acquired infection

### **Relative Exclusion Criteria**

1. Strong history of parental (custodial) alcohol or substance abuse
2. Documented parental (custodial) child abuse or neglect
3. Family situation unable to support long term medical needs of recipient
4. Parent (custodian) with cognitive psychiatric impairment severe enough to affect comprehension of child's medical regimen