Three month old child with dilated cardiomyopathy for evaluation for heart transplantation

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The patient is a 3 month old former full-term who presented in significant respiratory distress and fever despite a week of ineffective antibiotic therapy, suspected of enteroviral myocarditis. Patient has recurrent atrial tachy-arrhythmias, cardiomegaly on CXR and echocardiogram with moderately dilated RA, TR with a peak velocity 4.5 m/s, severe MR, moderately depressed RV and LV function with septal bowing into the LV cavity in systole. Patient is scheduled for a cardiac catheterization for hemodynamic evaluation, endomyocardial biopsy and pre-transplant evaluation.

**Pertinent objectives/issues to be discussed:**

A- The incidence, etiology and outcomes of cardiomyopathy in children
B- Methods available for the assessment of cardiomyopathy and evaluation for transplantation
C- Complications of cardiac catheterization and endomyocardial biopsy in children
D- Anesthetic options for cardiac catheterization in children with significant cardiac failure and the impact on hemodynamic evaluation

**AR Question 1:**

The most common cause of cardiac failure in neonates and infants is:

1. Viral myocarditis
2. Idiopathic dilated cardiomyopathy
3. Cyanotic congenital heart disease
4. Metabolic disease

Evaluation for cardiac transplantation in children is most effectively obtained with:

1. Echocardiography
2. Cardiac MRI
3. Endomyocardial biopsy
4. Hemodynamic cardiac catheterization

Sedation/anesthesia for pediatric cardiac catheterization and myocardial biopsy in my practice is provided:

1. By pediatric cardiac anesthesiologists only
2. By a pediatric anesthesiologist
3. By cardiology directed nurse-sedation in most cases except a select unstable patient

In my practice, anesthesia for pre-transplant evaluation is best achieved with:
1. Spontaneous ventilation, with light sedation
2. LMA with inhalation anesthetic
3. Endotracheal intubation and general anesthesia

References: