- Compliance with medication regimen, if prescribed

Cardiomyopathy

Cardiomyopathy refers to abnormalities of the myocardium in which the cardiac muscles' ability to contract is impaired. Cardiomyopathies are relatively rare in children. Possible etiologic factors include familial or genetic causes, infection, deficiency states, metabolic abnormalities, and collagen vascular diseases. Most cardiomyopathies in children are considered primary or idiopathic, in which the cause is unknown and the cardiac dysfunction is not associated with systemic disease. Some of the known causes of **secondary cardiomyopathy** are anthracycline toxicity (the antineoplastic agents, doxorubicin [Adriamycin] and daunomycin), hemochromatosis (from excessive iron storage), Duchenne muscular dystrophy, Kawasaki disease, collagen diseases, and thyroid dysfunction.

Cardiomyopathies can be divided into three broad clinical categories according to the type of abnormal structure and dysfunction present: (1) dilated cardiomyopathy, (2) hypertrophic cardiomyopathy, and (3) restrictive cardiomyopathy.

Dilated cardiomyopathy is characterized by ventricular dilation and greatly decreased contractility, resulting in symptoms of HF. This is the most common type of cardiomyopathy in children. Its cause is often unknown. The clinical findings are of HF with tachycardia, dyspnea, hepatosplenomegaly, fatigue, and poor growth. Dysrhythmias may be present and may be more difficult to control with worsening HF.

Hypertrophic cardiomyopathy is characterized by an increase in heart muscle mass without an increase in cavity size, usually occurring in the left ventricle and associated with abnormal diastolic filling. It is a familial autosomal dominant genetic abnormality in most cases and is probably the most common genetically transmitted cardiovascular disease (Maron, 2001). The expression of clinical disease varies greatly among patients. Clinical symptoms usually appear in school-age period or adolescence and may include anginal chest pain, dysrhythmias, and syncope. One recent study confirmed that unexplained syncope in the childhood age group (younger than 18 years old) with known hypertrophic