The Foundation board is comprised of medical professionals with experience in myocarditis and lay persons who have been touched by the disease.

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**The Myocarditis Foundation**

**You Can Help, Please Donate:**

By Mail: The Myocarditis Foundation
3518 Echo Mountain Drive
Kingwood, Texas 77345

Online: [www.myocarditisfoundation.org](http://www.myocarditisfoundation.org)
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The Myocarditis Foundation (MF) seeks to increase awareness and hasten progress in understanding myocarditis by awarding grants to help guarantee that new and innovative research avenues are thoroughly funded and explored. Please donate now.

The MF is a private, non-profit organization that exists to educate physicians and the public about this rare disease and support the patients and their families who have been affected by the disease. All of the money donated to MF will go directly to programs and services.

For more information:
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**Knowledge Nurtures Hope. . .**

Your journey is just beginning

The Myocarditis Foundation
is here to help.

Updated 3/2021
DEFINITION: What is Myocarditis?

Myocarditis is a rare, potentially life-threatening inflammatory disorder of the myocardium. It is a common cause of heart failure in otherwise healthy children and accounts for up to one-third of the cases of pediatric dilated cardiomyopathy. The true incidence of myocarditis in children is difficult to determine. Some cases are subclinical, making it difficult to make a timely and accurate diagnosis. Recognition is made difficult in very young children because they cannot clearly describe their symptoms. Moreover, the signs and symptoms often mimic those of more common childhood diseases such as asthma, bronchiolitis, and gastroenteritis. Including myocarditis in the differential diagnosis of children presenting with non-specific symptomatology can be lifesaving. Most children with myocarditis recover with treatment, but a substantial percentage may develop progressive heart failure leading to transplantation or death. Prompt diagnosis is imperative to allow for rapid and appropriate treatment of these children.

ETIOLOGY

In the developed world, the most common causes of pediatric myocarditis are viral infections. Enteroviruses, in particular coxsackievirus B, were historically implicated as a common cause of this disease in children, although many other infectious agents have since been identified. Other viruses such as influenza, adenovirus, and parvovirus B19 as well as bacteria, fungi, protozoa, rickettsiae and parasites may also cause myocarditis. The variable nature of the pediatric myocarditis patients’ presenting signs and symptoms makes it difficult to diagnose accurate myocardial inflammation. Immune-mediated diseases such as collagen vascular diseases, venom, toxins, and some chemotherapeutic agents can also lead to myocarditis.

CLINICAL PRESENTATION

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FURTHER DIAGNOSTIC EVALUATION

Common findings on diagnostic evaluation in pediatric myocarditis are:

- **Chest radiography:** Cardiomegaly and pulmonary vascular congestion are important findings on a chest radiograph in the myocarditis patients and can help to distinguish a diagnosis of myocarditis from other common respiratory ailments. However, these radiographic features may not be evident in cases presenting as fulminant myocarditis. In patients presenting with shock or impending shock of unknown cause without cardiomegaly or pulmonary vascualr congestion on chest radiograph, a diagnosis of myocarditis cannot be excluded.

- **Electrocardiography:** The electrocardiogram (ECG) is usually abnormal in pediatric myocarditis patients. Findings on ECG may include sinus tachycardia, low voltage, QRs complexes, ST-T wave abnormalities, prolonged QT intervals and/or atrioventricular block. A variety of tachy- and brady-arythmias including ventricular tachycardia and third degree atrioventricular block may be observed in pediatric myocarditis.

PROGNOSIS

Most children with myocarditis recover with supportive care, but a substantial percentage may develop progressive heart failure leading to cardiac transplantation or death. In some situations, death is sudden and unexpected and a diagnosis of myocarditis is not made until post-mortem examination is performed. Prompt diagnosis is imperative to allow for rapid and appropriate treatment of these children. There is no virus-specific therapy for myocarditis. Treatment is focused on correcting hemodynamic derangements, optimizing cardiac output, and providing symptomatic relief. In children with shock or impending shock, temporary mechanical circulatory support (ECMO or ventricular assist devices) can maintain circulation and end-organ perfusion, allowing some patients to bridge to myocardial recovery.