

Destination Healthy Heart:

A ROADMAP TO MANAGING
HEART FAILURE



Heart Failure

DUE TO MYOCARDITIS/VIRAL ILLNESS NURSE TALKING TIPS SHEET

This nurse tipsheet was developed by AAHFN as resource in facilitating patient education. It provides additional information so that the nurse can supplement their patient teaching with the corresponding patient tipsheet. Because no one page could be exhaustive, a list of resources is provided on page two for additional information.

Patient teaching should focus on:

The unique features of infective myocarditis :

- This is typically an acute illness that will get better, however chronic heart failure can develop;
- Rest is imperative and exercise should be avoided during the acute phase;
- Medications may be weaned down as acute illness improves, but lifelong medications and care will be necessary;
- While this patient already developed myocarditis, others could benefit from education that routine vaccinations reduce the incidence of myocarditis.

Background:

Myocarditis or “inflammatory cardiomyopathy” is due to inflammation and infiltration of the myocardium which can lead to myocyte damage.

Diagnosis:

- Caused by infectious, autoimmune, exogenous agents with genetic and environmental predisposition
- In viral myocarditis, patients present with recent history of flulike symptoms 1-2 weeks prior to onset of HF symptoms
- As many as 12.8% of patients with idiopathic dilated cardiomyopathy may have had myocarditis in the past
- Myocarditis is rare and often only diagnosed by testing that indicates heart injury

Assessment:

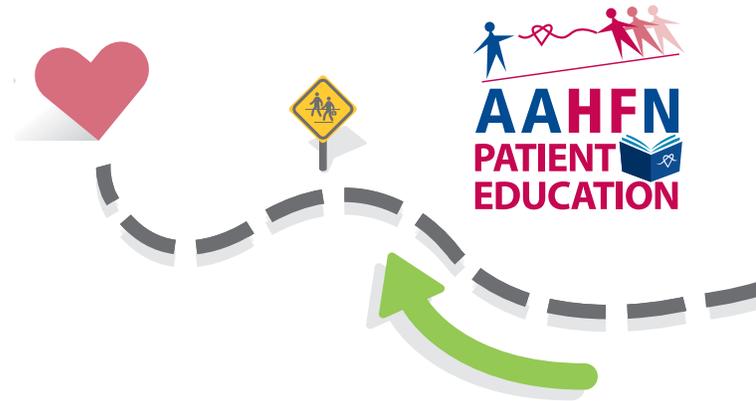
- Most cases are not clinically obvious as adults may present with few symptoms.
- Can present in otherwise healthy individuals with no other risk factors for heart failure.
- Most patients with mild symptoms recover completely without any residual cardiac dysfunction, although up to one third may develop a dilated cardiomyopathy.
- Endomyocardial biopsy (EMB) is the criterion standard for the diagnosis of myocarditis but has limited sensitivity and specificity, as inflammation can be diffuse or focal.

Causes of myocarditis:

- Viral - Enterovirus, coxsackie B, adenovirus, influenza, cytomegalovirus, poliomyelitis, Epstein-Barr virus, HIV-1, viral hepatitis, mumps, rubeola, varicella, variola/vaccinia, arbovirus, respiratory syncytial virus, herpes simplex virus, yellow fever virus, rabies, parvovirus
- Rickettsial - Scrub typhus, Rocky Mountain spotted fever, Q fever
- Bacterial - Diphtheria, tuberculosis, streptococci, meningococci, brucellosis, clostridia, staphylococci, melioidosis, *Mycoplasma pneumoniae*, psittacosis
- Spirochetal - Syphilis, leptospirosis/Weil disease, relapsing fever/Borrelia, Lyme disease
- Fungal - Candidiasis, aspergillosis, cryptococcosis, histoplasmosis, actinomycosis, blastomycosis, coccidioidomycosis, mucormycosis
- Protozoal - Chagas disease, toxoplasmosis, trypanosomiasis, malaria, leishmaniasis, balantidiasis, sarcosporidiosis
- Helminthic - Trichinosis, echinococcosis, schistosomiasis, heterophyiasis, cysticercosis, visceral larva migrans, filariasis
- Other causes: Bites/stings, Toxins such as medications or illicit drugs, chemicals, radiation, heatstroke, hypothermia, rheumatic fever, or other systemic inflammatory disease (e.g.: giant cell myocarditis, sarcoidosis, Kawasaki disease, etc.)

Treatment:

- The underlying infectious or systemic inflammatory etiology should be treated.
- Beta blockers should be avoided during the acutely decompensated phase because they increase the extent of myocardial necrosis and mortality.
- Digoxin and NSAIDS also increase mortality and thus should be avoided.
- Risk of relapse is unknown following recovery of myocarditis. ACE inhibitors and evidence based beta blockers may be continued.
- Any residual structural cardiac dysfunction or remodeling should be treated with guideline directed medical therapies for heart failure.
- Very few patients require permanent pacemaker or automatic implantable cardioverter-defibrillator (AICD) placement.



For Further Reference:

Medscape online: Myocarditis: Wai Hong Wilson Tang, <http://emedicine.medscape.com/article/156330-overview> , Sep 05, 2014.

Durani, Y, Durani Y, Egan M, Baffa J, et al. Pediatric myocarditis: presenting clinical characteristics. *Am J Emerg Med.* Oct 2009;27(8):942-7. [Medline].

Myocarditis Foundation: www.myocarditisfoundation.org/about-myocarditis/