



Pediatric Chest Pain Evaluation Algorithm

To effectively and safely
rule out cardiac etiology for
chest pain

Sibley Heart Center would like to acknowledge the contribution of the collaborators on this project: Kids Health First, the Children's Health Network, Georgia Pediatric Subspecialists, Emory Children's Center and Wellstar Pediatrics. We are grateful to them for their hard work and insightful comments which were essential in bringing this project together.

Algorithm

- Based on a series of responses to questions regarding history and physical exam
- All “yes” answers in algorithm lead to a recommendation for cardiovascular evaluation
 - ***Activity restrictions while awaiting appointment*** *Patients awaiting cardiovascular evaluation for chest pain should generally be restricted from competitive sports and vigorous exercise until evaluated by cardiology*
 - ***Indications for the ER*** *Patients who are toxic-appearing, have severe, sudden onset chest pain, and those who have significantly abnormal vital signs should be considered for evaluation in the emergency department*

Pain Features

- Acute onset < 48 hours
- Positional (worse supine, improved with leaning forward)
- With Exercise

↓ No

Associated Symptoms

- Palpitations
- Syncope
- Unexplained shortness of breath

↓ No

Additional Symptoms

- Syncope *during* exercise, emotion, or startle?
- Syncope *after* exercise?
- Extreme fatigue associated with exercise (different from others their age)?
- Unusual or extreme shortness of breath during exercise?

↓ No

Yes

Yes

Yes

Obtain Cardiovascular Evaluation

Additional Medical History

- Congenital Heart Disease
- Kawasaki Disease
- Turner Syndrome

↓ No

Family History

- Any family members who died suddenly of heart problems before age 50?
- Any family members who have unexplained fainting or seizures?
- Any relatives with the following conditions?
 - Hypertrophic cardiomyopathy
 - Dilated cardiomyopathy
 - Connective tissue disorder(Marfan or Ehlers-Danlos Syndrome)
 - Aortic Rupture, dissection, or aneurysm

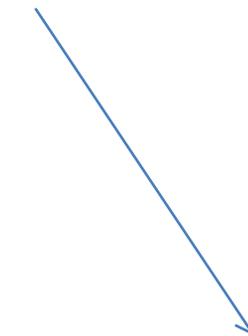
↓ No

Physical Exam Features

- Unexplained fever
- Signs of connective tissue disease(Marfan)
- Pathologic Murmur
- Rub
- Click
- Kawasaki criteria
- Signs of heart failure
- Xanthomas

↓ No

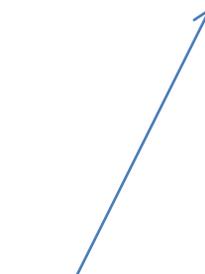
Yes



Yes



Obtain Cardiovascular Evaluation



Yes

Chest Pain is non-cardiac, patient does not require cardiovascular evaluation