HPH Guidelines for Initial Evaluation of a Patient with Chest Pain – Pediatric

Effective June 26, 2017

The following guidelines are designed to provide guidance to practicing clinicians regarding the transfer of pediatric patients for Chest Pain. These guidelines are not intended to supersede the medical judgment of the attending provider.

Purpose of This Clinical Tool:

Non-traumatic chest pain is a common symptom in children and adolescents and is a frequent complaint in patients seeking primary, emergent, or subspecialty care. Although the etiology is benign in most cases, this symptom may lead to school absences, restriction of activities and causes considerable anxiety in patients and their families. A thorough history and physical examination usually can determine the cause and identify patients who require acute intervention and those who can be managed with reassurance and continued follow-up. Laboratory testing is necessary only in a small number of patients. In the absence of associated symptoms of illness, positive findings on physical examination related to the cardiac or respiratory systems, or symptoms during exertion, a serious organic cause is unlikely. *(Up to date Sept 2016)*

Goals of Evaluating Chest Pain:

1. Distinguish between acute chest pain vs history of chest pain – acute chest pain will most likely need to be evaluated in emergency room.
2. Rule out coronary artery problems, myocardial ischemia, pericarditis, or aortic dissection.

Indications for Referral to the ER:

1. Acute chest pain – especially if radiates to neck, jaw, or left arm.
2. Acute chest pain associated with diaphoresis, shortness of breath, or syncope.

Indications for Pediatric Subspecialty Consultation or Referral:

1. Pain lasts >10 minutes, associated with exercise, radiates to jaw or neck or left arm, or worsens if supine and improves if prone.
    a. If pain with exertion – restrict exercise until evaluated and cleared by Cardiology.
2. Pain in a patient with Marfan Syndrome or phenotype.
    a. Consider ordering ECHO prior to referral.
3. Pain in a patient with prior heart surgery, history of Kawasaki Disease, friction rub on exam.

Recommended Screening Questions and Physical Exam Points:

Questions:

1. Duration of pain (not worrisome if seconds or a couple of minutes)
2. Quality of chest pain (not worrisome if sharp and precordial)
3. Chest pain with exercise (worrisome if occurs during exercise)
4. Exertional syncope
5. Chest pain that radiates to back, jaw, left arm, or left shoulder, or increases with supine position
6. Chest pain temporarily associated with fever
7. Screen for other associated symptoms – palpitations, dizziness, syncope, present at rest, worse with inspiration or pleuritic in nature

Physical Exam:

1. Accurate vital signs with orthostatic blood pressure as needed
2. Presence of murmur, gallop, distant heart sounds, friction rub
3. Peripheral edema
4. Physical features associated with syndromes (e.g. Marfan Syndrome)
5. Sternotomy, thoracotomy

Imaging Options:

1. ECHO:
    a. Helpful only if chest pain occurs with exercise, in Marfan syndrome, or if history of heart surgery or Kawasaki Disease.
    b. Specify evaluation of coronary arteries since it's important to look at origin and size of arteries (can specify Kawasaki Disease ECHO protocol).
2. EKG – helpful if patient with acute chest pain, ischemia, pericarditis.