Cardiac Differential Diagnosis

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Andrew Irzyk 2015
MCEMS
Differential Diagnosis of Chest Pain

• There are literally dozens of illnesses, injuries and conditions that can cause chest pain.

• Knowing common signs, symptoms and patient presentations can help you differentiate between different kinds of chest pain.

• Bottom Line: If you are ever not sure what kind of chest pain you are dealing with, treat it as cardiac and call medical control.
Differential Diagnosis of Chest Pain
Common Causes of Chest Pain

**Cardiovascular:**
- ischemia (AMI or angina)
- pericarditis (irritation of pericardium)
- thoracic aortic dissection

**Respiratory:**
- PE (pulmonary embolism)
- pneumothorax
- pneumonia
- pleural irritation
- hyperventilation (anxiety)
Differential Diagnosis of Chest Pain
Common Causes of Chest Pain

**Gastrointestinal:**
- cholecystitis (gall bladder/gallstones)
- pancreatitis
- hiatal hernia (part of stomach pushes through diaphragm)
- esophageal disease/GERD
- peptic ulcers
- dyspepsia (indigestion)

**Musculoskeletal:**
- chest wall syndrome (inflamed chest wall)
- costochondritis (inflamed rib cartilage)
- herpes zoster (shingles)
- chest wall trauma
- chest wall tumors
Non Cardiac Chest Pain

- Pulmonary
  - Pneumonia
  - Pleuritis
  - Pneumothorax
  - Pulmonary Embolism
  - Tumor

- Gastrointestinal
  - GERD
  - Esophageal spasm
  - Mallory-Weiss Tear
  - Peptic Ulcer disease
  - Biliary/Gallbladder Disease
  - Pancreatitis

- Musculoskeletal
  - Costochondritis
  - Cervical Disk Disease
  - Rib Fracture
  - Intercostal Muscle Cramp

- Other
  - Herpes Zoster
  - Disorders of the Breast
  - Splenic Infarct
  - Panic Attacks/Anxiety Disorder
  - Fibromyalgia
  - DKA
CHEST PAIN

Retrosternal
- Myocardial ischemic pain
- Pericardial pain
- Esophageal pain
- Aortic dissection
- Mediastinal lesions
- Pulmonary embolism

Intercapular
- Myocardial ischemic pain
- Musculoskeletal pain
- Gallbladder pain
- Pancreatic pain

Lower Anterior Chest
- Gallbladder pain
- Distention of the liver
- Subdiaphragmatic abscess
- Pneumonia/pleurisy
- Gastric or duodenal penetrating ulcer
- Pulmonary embolization
- Acute myositis
- Injuries

Epigastric
- Myocardial ischemic pain
- Pericardial pain
- Esophageal pain
- Duodenal/gastric pain
- Pancreatic pain
- Gallbladder pain
- Distention of the liver
- Diaphragmatic pleurisy
- Pneumonia

Shoulder
- Myocardial ischemic pain
- Pericarditis
- Subdiaphragmatic abscess
- Diaphragmatic pleurisy
- Cervical spine disease
- Acute musculoskeletal pain
- Thoracic outlet syndrome

Arms
- Myocardial ischemic pain
- Cervical/dorsal spine pain
- Thoracic outlet syndrome

Left Lower Anterior Chest
- Intercoastal neuralgia
- Pulmonary embolization
- Myositis
- Pneumonia/pleurisy
- Splenic infarction
- Splenic flexure syndrome
- Subdiaphragmatic abscess
- Percordial catch syndrome
- Injuries
QUESTIONS TO HELP DIFFERENTIATE CHEST PAIN

• CAUSE
• ONSET OF PAIN
• CHARACTERISTIC OF PAIN
• LOCATION OF PAIN
• HISTORY
• ASSOCIATED SX/SX
• AGGRAVATING FACTORS
• RELIEVING FACTORS
DETERMINE ONSET/DURATION OF PAIN

Was it...
Sudden?
Gradual?
Lasts Minutes?
Lasts Hours?
Varies?
Assessment

“QUALITY” OF PAIN

- PLEURITIC (sharp pain with inhalation)
- SPASMODIC (like a spasm)
- TIGHTNESS OR HEAVINESS
- PRESSURE
- SHARP/LOCALIZED (easy to pinpoint)
- VISCERAL (hard to pinpoint)/BURNING
- TEARING / EXCRUCIATING

LOCATION

- SITUATIONAL / ANXIETY
- SUBSTERNAL
- CENTER OR ACROSS CHEST
- LATERAL CHEST
- LOCALIZED OVER INVOLVED AREA
- LOWER CHEST/EPIGASTRIC
- RADIATES TO JAW, NECK, BACK OR ARM
- VAGUE
Visceral Pain

- Visceral fibers enter the spinal cord at several levels leading to poorly localized, poorly characterized pain. (discomfort, heaviness, dull, aching)
- Heart, blood vessels, esophagus and visceral pleura are innervated by visceral fibers
- Because of dorsal fibers can overlap three levels above or below, disease of thoracic origin can produce pain anywhere from the jaw to the epigastrium

Parietal Pain

- Parietal pain, in contrast to visceral pain, is described as sharp and can be localized to the dermatome superficial to the site of the painful stimulus.
- The dermis and parietal pleura are innervated by parietal fibers.
Assessment

History

- AGE
- PREVIOUS EPISODES
- UPPER RESPIRATORY INFECTION/FEVER
- TRAUMA
- STRESS
- EMOTIONAL UPSET
- CARDIAC DISEASE
  - HTN, CAD, ANGINA
- PHLEBITIS

Associated Signs/Symptoms

- DYSPNEA
- DIAPHORESIS
- NAUSEA / VOMITING
- AMS / WEAKNESS / LIGHTHEADEDNESS / SYNCOPE
- NEURO CHANGES
- HYPO OR HYPERTENSION OR UNEQUAL BP
- DECREASED OR ABNORMAL BREATH SOUNDS
- CYANOSIS
- HEMOPTYSIS (coughing up blood)
- PULSATING ABD MASS
- ABDOMINAL PAIN
- VESICULAR PAIN WITH PALPATION
- RASH OR LESIONS
### Assessment

<table>
<thead>
<tr>
<th>AGGRAVATING FACTORS?</th>
<th>RELIEVING FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• BREATHING</td>
<td>• REST OR DECREASED MOVEMENT</td>
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<tr>
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<td>• POSITION</td>
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<tr>
<td>• STRESS</td>
<td>• SITTING UP OR LEANING FORWARD</td>
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<td>• EXERTION</td>
<td>• DECREASED OR SHALLOW BREATHING</td>
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<tr>
<td>• AFTER EATING OR ETOH</td>
<td>• DIET</td>
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<td>• LAYING DOWN</td>
<td>• ANTACIDS</td>
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<td>• MEDICATIONS</td>
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</tbody>
</table>
Now lets match the chest pain diagnosis with the symptoms....

The list items in red italics are the ones that go with the diagnosis....
ANGINA
ONSET/DURATION OF PAIN

- Sudden
- Gradual
- Lasts Minutes
- Lasts Hours
- Varies
Angina

**QUALITY**
- PLEURITIC
- **SPASMODIC**
- **TIGHTNESS OR HEAVINESS**
- PRESSURE- OPPRESSIVE
- SHARP/Localized
- Visceral/ **BURNING**
- TEARING / EXCRUCIATING

**LOCATION**
- **SUBSTERNAL**
- CENTER OR ACROSS CHEST
- LATERAL CHEST
- LOCALIZED OVER INVOLVED AREA
- LOWER CHEST/EPIGASTRIC
- **RADIATES TO JAW, NECK, BACK OR ARM**
- VAGUE
# Angina

## HISTORY
- **AGE**
- **PREVIOUS EPISODES**
- **UPPER RESPIRATORY INFECTION/FEVER**
- **TRAUMA**
- **STRESS**
- **EMOTIONAL UPSET**
- **CARDIAC DISEASE – HTN, CAD, ANGINA**
- **PHLEBITIS**

## ASSOCIATED SX / SX
- **DYSPNEA**
- **DIAPHORESIS**
- **NAUSEA / VOMITING**
- **AMS /WEAKNESS / LIGHTHEADEDNESS / SYNCOPE**
- **NEURO CHANGES**
- **HYPO OR HYPERTENSION** OR UNEQUAL BP
- **DECREASED OR ABNORMMAL BREATH SOUNDS**
- **CYANOSIS**
- **HEMOPTYSIS**
- **PULSATING ABD MASS**
- **ABDOMINAL PAIN**
- **VESICULAR PAIN WITH PALPATION**
- **RASH OR LESIONS**
Angina

AGGRAVATING FACTORS
- BREATHING
- MOVEMENT
- STRESS
- EXERTION
- AFTER EATING OR ETOH
- LAYING DOWN
- SITUATIONAL / ANXIETY

RELIEVING FACTORS
- REST OR DECREASED MOVEMENT
- POSITION
- SITTING UP OR LEANING FORWARD
- DECREASED OR SHALLOW BREATHING
- DIET
- MEDICATIONS (nitro)
Acute Myocardial Infarction
ONSET/DURATION OF PAIN

- **Sudden**
- Gradual
- **Lasts Minutes**
- **Lasts Hours**
- Varies
Acute Myocardial Infarction

**QUALITY**
- PLEURITIC
- SPASMODIC
- TIGHTNESS OR HEAVINESS
- PRESSURE- OPPRESSIVE
- SHARP/LOCALIZED VISCERAL/BURNING
- TEARING / EXCRUCIATING

**LOCATION**
- SUBSTERNAL
- CENTER OR ACROSS CHEST
- LATERAL CHEST
- LOCALIZED OVER INVOLVED AREA
- LOWER CHEST/EPIGASTRIC
- RADIATES TO JAW, NECK, BACK OR ARM
- VAGUE
Acute Myocardial Infarction

**HISTORY**
- AGE
- PREVIOUS EPISODES
- UPPER RESPIRATORY INFECTION/FEVER
- TRAUMA
- STRESS
- EMOTIONAL UPSET
- CARDIAC DISEASE – HTN, CAD, ANGINA
- PHLEBITIS

**ASSOCIATED SX / SX**
- DYSPNEA
- DIAPHORESIS
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- CYANOSIS
- HEMOPTYSIS
- PULSATING ABD MASS
- ABDOMINAL PAIN
- VESICULAR PAIN WITH PALPATION
- RASH OR LESIONS
Acute Myocardial Infarction

AGGRAVATING FACTORS
- BREATHING
- MOVEMENT
- STRESS
- EXERTION
- AFTER EATING OR ETOH
- LAYING DOWN
- SITUATIONAL / ANXIETY

RELIEVING FACTORS
- REST OR DECREASED MOVEMENT
- POSITION
- SITTING UP OR LEANING FORWARD
- DECREASED OR SHALLOW BREATHING
- DIET
- ANTACIDS
- MEDICATIONS
**Operational Policy: Transport Destination**

**Initiated:** 12/10/82  
**Reviewed/revised:** 11/1/14  
**Revision:** 38  

**POLICY:** Patients are to be transported to the closest, most appropriate, open receiving hospital, taking into consideration:
- Patient’s medical condition;
- Patient’s request;
- Location of regular care, primary medical doctor and/or medical records;
- Insurance/MVO.

Patients in need of specialty care should be transported to the closest appropriate receiving facility, based on the following information:

<table>
<thead>
<tr>
<th>Medical Emergencies</th>
<th>Columbia St. Mary’s (CSM):</th>
<th>Wheaton Franciscan Healthcare (WFH):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aurora:</td>
<td>Milwaukee</td>
<td>All Saints (Recine)</td>
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<tr>
<td></td>
<td>Czauke</td>
<td>Elmbrook Memorial</td>
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<td>Franklin</td>
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<td>St. Francis</td>
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<td>St. Joseph</td>
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<td>The Wisconsin Heart Hospital</td>
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<tr>
<td>Children’s Hospital and Health System</td>
<td>Froedter Health: Community Memorial Froedter</td>
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<tr>
<td></td>
<td></td>
<td>ProHealth Care: Waukesha Memorial</td>
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</tbody>
</table>

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<thead>
<tr>
<th>Patient Assessment</th>
<th>Specialty Hospital:</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEMI (Acute MI per pre-hospital ECG) ROSC</td>
<td>Transport to closest hospital, <strong>regardless of diversion status</strong> – Aurora; Gramoth; St. Luke’s Milwaukee; Children’s Hospital of Wisconsin; CSM-Milwaukee; CSM-Czauke; Community Memorial; Froedter Hospital; Waukesha Memorial; All Saints; Elmbrook Memorial; St. Francis; St. Joseph; WI Heart Hospital. If patient is stable and requests transport to medical home, transport to closest STEMI/ROSC hospital within medical system.</td>
</tr>
</tbody>
</table>
### Operational Policy:

#### Designation by Hospital

<table>
<thead>
<tr>
<th>Hospital</th>
<th>MC EMS Stroke Center*</th>
<th>MC EMS PCI Receiving Hospital*</th>
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<tbody>
<tr>
<td>Aurora Grafton</td>
<td>Stroke</td>
<td>STEMI/ROSC</td>
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<td>STEMI/ROSC</td>
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<tr>
<td>Aurora St. Luke's (Main)</td>
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<td>STEMI/ROSC</td>
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<tr>
<td>Aurora St. Luke's – South Shore</td>
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<td>STEMI/ROSC</td>
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</tbody>
</table>
Dissecting Aneurysm

ONSET/DURATION OF PAIN

- **Sudden**
- Gradual
- Lasts Minutes
- Lasts Hours
- Varies
Dissecting Aneurysm

QUALITY
- PLEURITIC
- SPASMODIC
- TIGHTNESS OR HEAVINESS
- PRESSURE- OPPRESSIVE
- SHARP/LOCALIZED VISCERAL/BURNING
- TEARING / EXCRUCIATING

LOCATION
- SUBSTERNAL
- CENTER OR ACROSS CHEST
- LATERAL CHEST
- LOCALIZED OVER INVOLVED AREA
- LOWER CHEST/EPIGASTRIC
- RADIATES TO JAW, NECK, BACK OR ARM
- VAGUE
- ABDOMEN
Aortic dissection
Dissecting Aneurysm

**HISTORY**
- AGE
- PREVIOUS EPISODES
- UPPER RESPIRATORY INFECTION/FEVER
- TRAUMA
- STRESS
- EMOTIONAL UPSET
- **CARDIAC DISEASE – HTN, CAD, ANGINA**
- PHLEBITIS

**ASSOCIATED SX / SX**
- DYSPNEA
- **DIAPHORESIS**
- NAUSEA / VOMITING
- **AMS / WEAKNESS / LIGHTHEADEDNESS / SYNCOPE**
- NEURO CHANGES
- HYPO OR HYPERTENSION OR **UNEQUAL BP**
- DECREASED OR ABNORMMAL BREATH SOUNDS
- CYANOSIS
- HEMOPTYSIS
- **PULSATING ABD MASS**
- ABDOMINAL PAIN
- VESICULAR PAIN WITH PALPATION
- RASH OR LESIONS
Dissecting Aneurysm
AGGRAVATING FACTORS

- BREATHING
- MOVEMENT
- STRESS
- EXERTION
- AFTER EATING OR ETOH
- LAYING DOWN
- SITUATIONAL / ANXIETY

• In other words, it hurts badly no matter what.
Dissecting Aneurysm

RELIEVING FACTORS

- REST OR DECREASED MOVEMENT
- POSITION
- SITTING UP OR LEANING FORWARD
- DECREASED OR SHALLOW BREATHING
- DIET
- ANTACIDS
- MEDICATIONS

- In other words, nothing helps it feel better.
PERICARDITIS

ONSET/DURATION OF PAIN

- **Sudden**
- Gradual
- Lasts Minutes
- **Lasts Hours**
- Varies
PERICARDITIS

QUALITY
- PLEURITIC
- SPASMODIC
- TIGHTNESS OR HEAVINESS
- PRESSURE- OPPRESSIVE
- **SHARP/LOCALIZED** VISCERAL/BURNING
- TEARING / EXCRUCIATING

LOCATION
- SUBSTERNAL
- **CENTER OR ACROSS CHEST/RETrosternal**
- LATERAL CHEST
- LOCALIZED OVER INVOLVED AREA
- LOWER CHEST/EPIGASTRIC
- **RADIATES TO JAW, NECK, BACK OR ARM**
- VAGUE
# PERICARDITIS

## HISTORY
- **AGE**
- **PREVIOUS EPISODES**
- **UPPER RESPIRATORY INFECTION/FEVER**
- **TRAUMA**
- **STRESS**
- **EMOTIONAL UPSET**
- **CARDIAC DISEASE – HTN, CAD, ANGINA**
- **PHLEBITIS**

## ASSOCIATED SX / SX
- **DYSPNEA**
- **DIAPHORESIS**
- **NAUSEA / VOMITING**
- **AMS /WEAKNESS / LIGHTHEADEDNESS / SYNCOPE**
- **NEURO CHANGES**
- **HYPO OR HYPERTENSION OR UNEQUAL BP**
- **DECREASED OR ABNORMMAL BREATH SOUNDS**
- **CYANOSIS**
- **HEMOPTYSIS**
- **PULSATING ABD MASS**
- **ABDOMINAL PAIN**
- **VESICULAR PAIN WITH PALPATION**
- **RASH OR LESIONS**
- **PARADOXICAL PULSE**
Pericarditis: ECG:
<table>
<thead>
<tr>
<th>PERICARDITIS</th>
<th>AGGRAVATING FACTORS</th>
<th>RELIEVING FACTORS</th>
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<tbody>
<tr>
<td></td>
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<td><strong>MEDICATIONS</strong></td>
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</tbody>
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PNEUMOTHORAX

ONSET/DURATION OF PAIN

- **Sudden**
- Gradual
- Lasts Minutes
- Lasts Hours
- Varies
PNEUMOTHORAX

QUALITY
- PLEURITIC
- SPASMODIC
- TIGHTNESS OR HEAVINESS
- PRESSURE- OPPRESSIVE
- SHARP/LOCALIZED VISCERAL/BURNING
- TEARING / EXCRUCIATING

LOCATION
- SUBSTERNAL
- CENTER OR ACROSS CHEST
- LATERAL CHEST
- LOCALIZED OVER INVOLVED AREA
- LOWER CHEST/EPIGASTRIC
- RADIATES TO JAW, NECK, BACK OR ARM
- VAGUE
Pneumothorax
Needle Decompression
PNEUMOTHORAX

HISTORY
- AGE
- PREVIOUS EPISODES
- UPPER RESPIRATORY INFECTION/FEVER
- TRAUMA
- STRESS
- EMOTIONAL UPSET
- CARDIAC DISEASE – HTN, CAD, ANGINA
- PHLEBITIS

ASSOCIATED SX / SX
- DYSPNEA
- DIAPHORESIS
- NAUSEA / VOMITING
- AMS /WEAKNESS / LIGHTHEADEDNESS / SYNCOPE
- NEURO CHANGES
- HYPO OR HYPERTENSION OR UNEQUAL BP
- DECREASED OR ABNORMAL BREATH SOUNDS
- CYANOSIS
- HEMOPTYSIS
- PULSATING ABD MASS
- ABDOMINAL PAIN
- VESICULAR PAIN WITH PALPATION
- RASH OR LESIONS
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PULMONARY EMBOLISM
ONSET/DURATION OF PAIN

- *Sudden*
- Gradual
- Lasts Minutes
- Lasts Hours
- Varies
# Pulmonary Embolism

## Quality
- Pleuritic
- Spasmodic
- Tightness or heaviness
- **Pressure-Oppressive**
- Sharp/localized visceral/burning
- Tearing/excruciating

## Location
- Subternal
- Center or across chest
- **Lateral chest**
- Localized over involved area
- Lower chest/epigastric
- Radiates to jaw, neck, back or arm
- Vague
PULMONARY EMBOLISM

HISTORY
- AGE
- PREVIOUS EPISODES
- UPPER RESPIRATORY INFECTION/FEVER
- TRAUMA
- STRESS
- EMOTIONAL UPSET
- CARDIAC DISEASE – HTN, CAD, ANGINA
- PHLEBITIS
- SMOKING/RECENT SURGERY/BCP (birth control pill)

ASSOCIATED SX / SX
- DYSPNEA
- DIAPHORESIS
- NAUSEA / VOMITING
- AMS /WEAKNESS / LIGHTHEADEDNESS / SYNCOPE
- NEURO CHANGES
- HYPO OR HYPERTENSION OR UNEQUAL BP
- DECREASED OR ABNORMAL BREATH SOUNDS
- CYANOSIS
- HEMOPTYSIS
- PULSATING ABD MASS
- ABDOMINAL PAIN
- VESICULAR PAIN WITH PALPATION
- RASH OR LESIONS
S1Q3T3

- S-waves in lead I
- Q-waves in lead III
- Inverted T-waves in lead III
PE: ECG

Name: [Redacted]
ID: [Redacted]
Patient ID: [Redacted]
Incident: [Redacted]
Age: 68
Sex: [Redacted]

12-Lead ECG:
- HR 113 bpm
- Abnormal ECG **Unconfirmed**
- Sinus tachycardia
- ST & T wave abnormality, consider anterior ischemia

Leads: I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6

x1.0 0.5-40Hz 25mm/sec
<table>
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</thead>
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<tr>
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</tr>
</tbody>
</table>
HIATAL HERNIA
ONSET/DURATION OF PAIN

- **Sudden**
- Gradual
- **Lasts Minutes**
- Lasts Hours
- Varies
HIATAL HERNIA
HIATAL HERNIA

**QUALITY**
- PLEURITIC
- **SPASMODIC**
- TIGHTNESS OR HEAVINESS
- PRESSURE- OPPRESSIVE
- **SHARP/LOCALIZED VISCERAL/BURNING**
- TEARING / EXCRUCIATING

**LOCATION**
- SUBSTERNAL
- CENTER OR ACROSS CHEST
- LATERAL CHEST
- LOCALIZED OVER INVOLVED AREA
- **LOWER CHEST/EPIGASTRIC**
- RADIATES TO JAW, NECK, BACK OR ARM
- VAGUE
HIATAL HERNIA

**HISTORY**
- AGE
- *PREVIOUS EPISODES*
- UPPER RESPIRATORY INFECTION/FEVER
- TRAUMA
- STRESS
- EMOTIONAL UPSET
- CARDIAC DISEASE – HTN, CAD, ANGINA
- PHLEBITIS

**ASSOCIATED SX / SX**
- DYSPNEA
- DIAPHORESIS
- *NAUSEA* / VOMITING
- AMS /WEAKNESS / LIGHTHEADEDNESS / SYNCOPE
- NEURO CHANGES
- HYPO OR HYPERTENSION OR UNEQUAL BP
- DECREASED OR ABNORMAL BREATH SOUNDS
- CYANOSIS
- HEMOPTYSIS
- PULSATING ABD MASS
- *ABDOMINAL PAIN*
- VESICULAR PAIN WITH PALPATION
- RASH OR LESIONS
HIATAL HERNIA

AGGRAVATING FACTORS
- BREATHING
- MOVEMENT
- STRESS
- EXERTION
- AFTER EATING OR ETOH
- LAYING DOWN
- SITUATIONAL / ANXIETY

RELIEVING FACTORS
- REST OR DECREASED MOVEMENT
- POSITION
- SITTING UP OR LEANING FORWARD
- DECREASED OR SHALLOW BREATHING
- DIET
- ANTACIDS
- MEDICATIONS
GASTROINTESTINAL ONSET/DURATION OF PAIN

- **Sudden**
- Gradual
- **Lasts Minutes**
- Lasts Hours
- Varies
GASTROINTESTINAL

QUALITY
- PLEURITIC
- SPASMODYC
- TIGHTNESS OR HEAVINESS
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**GASTROINTESTINAL**

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- HEMOPTYSIS
- PULSATING ABD MASS
- **ABDOMINAL PAIN**
- VESICULAR PAIN WITH PALPATION
- RASH OR LESIONS

*Maybe none.... For example, food poisoning doesn’t require a history other than recent eating.*
GASTROINTESTINAL

AGGRAVATING FACTORS

- BREATHING
- MOVEMENT
- STRESS
- EXERTION
- AFTER EATING OR ETOH
- LAYING DOWN
- SITUATIONAL / ANXIETY

RELIEVING FACTORS

- REST OR DECREASED MOVEMENT
- POSITION
- SITTING UP OR LEANING FORWARD
- DECREASED OR SHALLOW BREATHING
- DIET
- ANTACIDS
- MEDICATIONS
PNEUMONIA/PLEURISY
ONSET/DURATION OF PAIN

- Sudden
- Gradual
- Lasts Minutes
- Lasts Hours
- Varies
PNEUMONIA/PLEURISY

QUALITY
- **PLEURITIC**
- SPASMODIC
- TIGHTNESS OR HEAVINESS
- PRESSURE- OPPRESSIVE
- **SHARP/LOCALIZED**
  VISCERAL/BURNING
- TEARING / EXCRUCIATING

LOCATION
- SUBSTERNAL
- CENTER OR ACROSS CHEST
- LATERAL CHEST
- **LOCALIZED OVER INVOLVED AREA**
- LOWER CHEST/EPIGASTRIC
- RADIATES TO JAW,
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PNEUMONIA/PLEURISY

HISTORY
- AGE
- PREVIOUS EPISODES
- UPPER RESPIRATORY INFECTION/FEVER
- TRAUMA
- STRESS
- EMOTIONAL UPSET
- CARDIAC DISEASE – HTN, CAD, ANGINA
- PHLEBITIS

ASSOCIATED SX / SX
- DYSPNEA
- DIAPHORESIS
- NAUSEA / VOMITING
- AMS / WEAKNESS / LIGHTHEADEDNESS / SYNCOPE
- NEURO CHANGES
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- DECREASED OR ABNORMAL BREATH SOUNDS
- CYANOSIS
- HEMOPTYSIS
- PULSATING ABD MASS
- ABDOMINAL PAIN
- VESICULAR PAIN WITH PALPATION
- RASH OR LESIONS
PNEUMONIA/PLEURISY

AGGRAVATING FACTORS
- BREATHING
- MOVEMENT
- STRESS
- EXERTION
- AFTER EATING OR ETOH
- LAYING DOWN
- SITUATIONAL / ANXIETY

RELIEVING FACTORS
- REST OR DECREASED MOVEMENT
- POSITION
- SITTING UP OR LEANING FORWARD
- DECREASED OR SHALLOW BREATHING
- DIET
- ANTACIDS
- MEDICATIONS
HYPERVENTILATION/ANXIETY
ONSET/DURATION OF PAIN

- **Sudden**
- Gradual
- Lasts Minutes
- Lasts Hours
- Varies
HYPERVERVENTILATION/ANXIETY

QUALITY
- PLEURITIC
- SPASMODIC
- TIGHTNESS OR HEAVINESS
- PRESSURE- OPPRESSIVE
- SHARP/LOCALIZED VISCERAL/BURNING
- TEARING / EXCRUCIATING
- VAGUE/DIFFUSE

LOCATION
- SUBSTERNAL
- CENTER OR ACROSS CHEST
- LATERAL CHEST
- LOCALIZED OVER INVOLVED AREA
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- RADIATES TO JAW, NECK, BACK OR ARM
- VAGUE
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- HEMOPTYSIS
- PULSATING ABD MASS
- ABDOMINAL PAIN
- VESICULAR PAIN WITH PALPATION
- RASH OR LESIONS
- **INCREASED RESP RATE**
- **NUMBNESS –EXTREMITIES/FACE**
HYPERVENTILATION/ANXIETY

AGGRAVATING FACTORS
- BREATHING
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- DECREASED ANXIETY
Hyperventilation Syndrome

- Causes can be:
  - Organic – CNS lesions, meningitis, drug ingestion
  - Physiologic – response to heat, exercise, altitude acclimation
  - Emotional – anxiety, anger, fear, depression
  - Chronic – sympathetic nervous system stimulation
Hyperventilation Syndrome

- **Causes**
  - Anxiety
  - Hypoxia
  - Pulmonary disease
  - Cardiovascular disorders
  - Metabolic disorders
    - hyperglycemia, acidosis
  - Neurological disorders
  - Fever
  - Infection
  - Pain
  - Pregnancy
  - Drug use
    - aspirin

- Hyperventilation caused by emotions (psychogenic dyspnea) is a diagnosis of exclusion!
The End

Resource:
Laurie Carroll, RN,
Advocate Bolingbrook Hospital