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Pathophysiology

• Somatic Pain fibers
  – Dermis and parietal pleura innervations
  – These enter the spinal cord at specific levels and arranged in a dermatomal pattern

• Visceral Pain fibers
  – Found in internal organs such as heart and esophagus and blood vessels
  – Enter the cord at multiple levels and “share” parietal cortex space with the somatic fibers
Pathophysiology

- **Somatic Pain fibers**
  - Pain is usually easily described
  - Precisely located
  - Described as a sharp sensation

- **Visceral Pain fibers**
  - Imprecisely localized
  - Difficult to describe
  - Often described as aching, discomfort, heaviness
  - Often misinterpreted because the pain is referred to a different area by the adjacent somatic nerve
Pathophysiology

• Several modifying factors to the pain sensation
• Co-morbidities, age, gender, medications, drugs, alcohol
• “Cultural and language difference”
Initial Approach

• In our evaluation we are concerned with the “acute chest pain”
• What recent event or change has brought them to the hospital?
• How is the patient experiencing the discomfort?
• The initial approach is based on the fact that there are life threatening causes of chest discomfort
Initial Approach

• Given the potentially serious concerns the patient should be addressed quickly and systematically
• IV, O2, Monitor
• Immediate life threats should be addressed systematically:
  • Airway
  • Breathing
  • Circulation
Initial Approach

• Vital signs should be assessed and repeated at regular intervals
• While you direct the rest of the team you then begin your direct questioning and primary survey
• What types of questions would you like to ask?
Initial Approach: History

• Are you having discomfort?
• How would you describe the discomfort?
• Where is the discomfort?
• Does it radiate anywhere?
• Any aggravating/alleviating factors?
• Any associated discomfort?
  – Diaphoresis, nausea, vomiting, cough, fevers
Initial Approach: History

• Frequency of the discomfort?
• Time of onset or acute worsening?
• Has there been any progression?
• History of Cardiopulmonary disease?
• Risk factors for cardiopulmonary disease?
• Family history of cardiopulmonary disease?
Physical Examination

• Your primary survey is a focused examination and will allow you to start interventions

• What is part of your primary survey?
  – General appearance of patient
  – Assessment of the airway
  – Assessment of breathing (listen to the pulmonary sounds)
  – Assessment of Circulation (listen to heart sounds)
Physical Examination

• Once you’ve evaluated for acute, life threatening conditions and reassessed vital signs then continue to the secondary survey.

• During this examination, you should look the other body systems and peripheral signs that can be associated with acute cardiopulmonary issues.