Case Study: Chest Pain

Clinical Dashboard - Pertinent History and Physical

Paragraph Summary of Case:

- Paragraph Summary: A 56-year-old male presents with 3 days of chest pain. The pain is substernal, pressing in nature, and radiates to his left arm. He reports associated nausea and diaphoresis. His past medical history is significant for hypertension and hyperlipidemia. On physical exam, he appears mildly distressed but is hemodynamically stable. EKG shows ST segment depression. Troponin is elevated, consistent with a non-ST elevation myocardial infarction (NSTEMI).

Patient Approach:

- Education Level: college graduate
- Emotional Response: worried, anxious
- Communication Style: articulate, direct

History of Present Illness (HPI):

- Onset: 3 days ago
- Location: substernal
- Duration: 3 days
- Character: pressing, squeezing

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- Aggravating/Alleviating Factors: aggravated by exertion, relieved by rest
- Radiation: radiating to left arm
- Timing: constant, not positional
- Severity: 8/10 in intensity
- Additional Details: associated with nausea and diaphoresis

Past Medical History (PMHx):

- Active Problems: hypertension, hyperlipidemia
- Inactive Problems: none
- Hospitalizations: none
- Surgical History: appendectomy 10 years ago
- Immunizations: up to date

Social History (SHx):

- Tobacco: quit 5 years ago, 20 pack-year history
- Alcohol: occasional social drinking
- Substances: none
- Diet: high in saturated fat and sodium
- Exercise: sedentary, desk job
- Sexual Activity: active, no concerns
- Home Life/Safety: lives with spouse, feels safe at home
- Mood: normal mood, no depression or anxiety
- Contextual Details: works as an accountant, high stress job

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Family History (FHx):

- Parents: father died of MI at age 62, mother alive with HTN
- Siblings: 1 sister, healthy

Medications and Allergies:

- Medications: lisinopril, atorvastatin
- Allergies: no known drug allergies

Review of Systems (ROS):

- Pertinent Findings: chest pain, nausea, diaphoresis

Physical Examination:

- Findings: BP 140/90, HR 90, RR 18, afebrile, oxygen saturation 95% on room air. Mild diaphoresis, normal heart and lung exam, no peripheral edema

Diagnostic Reasoning:

- Essential HPI Details User Should Elicit: timing, location, character, radiation, aggravating/alleviating factors, associated symptoms
- Differential Diagnoses: acute coronary syndrome, aortic dissection, esophageal spasm, pulmonary embolism
- Rationale: The patient's presentation with substernal, pressing chest pain radiating to the left arm,

associated with nausea and diaphoresis, is highly concerning for acute coronary syndrome, specifically a non-ST elevation myocardial infarction (NSTEMI). The patient's risk factors, including age, male sex, smoking history, hypertension, and hyperlipidemia, further support this diagnosis.

Teaching Points:

- Key Learning Objectives: 1) Recognize the importance of a thorough history and physical exam in the evaluation of chest pain, 2) Understand the diagnostic criteria and initial management of NSTEMI, 3) Identify high-risk features that warrant early intervention
- Educational Content: Chest pain is a common presenting symptom with a broad differential diagnosis. Acute coronary syndrome, including NSTEMI, is a life-threatening condition that requires prompt recognition and treatment. Key historical features to elicit include the timing, location, character, radiation, aggravating/alleviating factors, and associated symptoms. Physical exam should focus on vital signs and cardiovascular assessment. Initial management of NSTEMI includes antiplatelet therapy, anticoagulation, and prompt revascularization for high-risk patients.

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PATIENT DOOR CHART and Learner Instructions

- Patient Name: John Doe
- Age: 56
- Legal Sex: Male
- Chief Complaint: Chest Pain
- Clinical Setting: Emergency Department

Vital Signs:

- Blood Pressure Reading: 140/90 mmHg
- Pulse Rate: 90 bpm
- Respiratory Rate: 18 breaths/min
- Temperature(Celsius): 36.6°C
- SpO2: 95% on room air