Full name: [redacted]

Sex: Female

Race: Hispanic

Language: English

Religion: unspecified

Date of Birth & Age: [redacted], 17 YO

Marital status: Single

Date and time: 3/31/26, 4:00PM

Location: Queens Hospital Center

Source of history: Self

Reliability: reliable

Referral source: self

Chief of complaint: Chest pain x 3 days

History of Present Illness:

17-year-old female with a past medical history of asthma presents to the ED with her mother for chest pain x 3 days. The pain is localized to the mid-sternal region and is described as stabbing and pressure-like. She took Tylenol without relief; the last dose was at last night. She reports that talking and palpation worsen the pain, denies radiation, and currently rates the pain as 4/10. Associated symptoms include dizziness and headache without syncope, shortness of breath, nausea without vomiting, and left calf pain x 1 day. She also reports a small amount of blood in her urine but states she is currently menstruating. She has been on oral contraceptive pills for the past 3 weeks and denies any complications. Denies fever, chills, rhinorrhea, sore throat, cough, wheezing, hemoptysis, vomiting, abdominal pain, diarrhea, hematochezia, urinary frequency, dysuria, lower extremity swelling or erythema, intermittent claudication, recent travel, or sick contacts. Immunizations are up to date. Wells score of 3 according to MDCalc.

Past medical history:

- Asthma
    - Denies taking albuterol or ICS for management of asthma. Last known asthma exacerbation specifics unknown to patient. Denies past intubation and hospital admission for asthma.

Allergies

- NKA

Vaccines: up to date

Past surgical history:

- No past surgical history

Medications:

- Sprintec 28 (0.25mg norgestimate + 0.035mg ethinyl estradiol)
- Tylenol 500 mg
- Multivitamin supplement

Family history:

- No reported family history

Social history:

Housing situation: Patient lives with her mother and father and denies any issues at home. There is no exposure to tobacco smoke, and there are no pets in the household.

Daycare/school: Patient is currently in high school; 12th grade. She is interactive with friends and classmates. She is excited to graduate in June and start college this upcoming fall. No other issues or stressors reported by patient.

Travel: No recent travels

Diet: Appropriate for her age, consumes balanced diet including fruits, vegetables, protein. Drinks juice, water, and soda every now and then. No known food allergies or feeding concerns reported. Appetite is good with no recent changes. 3 meals per day. Last oral intake was last night; able to tolerate with no vomiting.

Alcohol/Drug use: Denies drinking and use of illicit drugs.

Smoking: Denies use of tobacco smoke and vape

Sleep: Average 8-9 hours. Denies complications/difficulty falling asleep.

Sexual activity: Sexually inactive. Currently on her menstrual period.

Review of systems:

General: Denies fever, chills, unintentional weight loss/gain

Skin: Denies skin rash, masses, bruising, discoloration, and skin lesions

HEENT: Reports headache and dizziness. Denies ear discharge, rhinorrhea, nasal discharge, sore throat.

Respiratory: Reports shortness of breath associated with chest pain. Denies cough, wheezing, hemoptysis

Cardiovascular: Reports chest pain. Denies palpitations, murmurs, syncope.

GI: Reports nausea. Denies abdominal pain, vomiting, diarrhea, melena, hematochezia

Genitourinary: Reports hematuria (likely menstrual-related). Denies dysuria, changes in urine output

Musculoskeletal: Reports left calf pain. Denies swelling, erythema, intermittent claudication

Neurological: Reports dizziness and headache. Denies seizures or changes in behavior recently

Psychiatric: Denies suicidal ideas, anxiety, mood changes.

Physical:

- Vital signs
    - Temperature (F): 98.2 F thermometer
    - Heart rate: 78
    - Respiration rate: 18
    - Blood pressure: 124/82
    - SpO2%: 100% RA

General: Patient appears her stated age. She is not in apparent acute distress. Seen in semi-fowler position on bed. Normal appearance, well kept, and not toxic appearing. She is alert and oriented x3 to person, place and time.

Head: Atraumatic and normocephalic. No lice/nits noted on scalp.

Eyes: pupils equal, round and reactive to light. No swelling, erythema, discharge noted.

Mouth: oral mucosa moist and clear, no erythema or exudates noted.

Neck/throat: negative lymphadenopathy, JVD. Supple

Cardiovascular: Regular rate/rhythm. No murmurs. S1/S2 normal. No gallops, rubs noted. No leg swelling or erythema noted. Cap refill < 2 secs of upper and lower extremities.

Pulmonary: Lung sounds clear to auscultation bilaterally. No wheezing, rhonchi, crackles noted. No respiratory distress. No accessory muscle use, nasal flaring, increased work of breathing, or tripod position noted.

Abdominal: Soft, non-distended, non-tender. No guarding, rebound, masses noted

Genitourinary: Deferred at the time.

Neurological: Patient is alert and oriented x 3. No focal deficit noted.

Skin: Warm and flushed pink. No rash noted on upper/lower extremities.

MSK: normal range of motion of upper and lower extremities. No joint tenderness on palpation.

Assessment

17-year-old female with PMHx of asthma presenting with 3 days of mid-sternal chest pain described as stabbing and pressure-like, worsened by palpation and talking, with associated shortness of breath, dizziness, nausea, and new-onset left calf pain. She is currently on oral contraceptive pills, which increases her risk for thromboembolic events. While the reproducible chest wall tenderness suggests a likely musculoskeletal differential such as costochondritis, the presence of shortness of breath, unilateral calf pain, and recent OCP use raises concern for possible deep vein thrombosis and pulmonary embolism, which must be ruled out. Other concerns include anxiety-related chest pain, viral illness, or less likely cardiac etiologies given her age and presentation. She is hemodynamically stable with chest pain most consistent with a benign musculoskeletal cause; however, given her risk factors and associated symptoms, a pulmonary embolism needs to be ruled out.

Differential diagnoses

1. **Costochondritis –** The patient's chest pain is localized to the mid-sternal area and is reproducible with palpation and worsened by movement (talking), which is classic for a musculoskeletal source. She is otherwise well-appearing and hemodynamically stable, with no concerning physical exam findings, further supporting a benign etiology.
2. **Pulmonary embolism/DVT –** Although less common in adolescents, this patient has multiple risk factors, including recent initiation of oral contraceptive pills and unilateral left calf pain, which raises concern for possible deep vein thrombosis. Associated symptoms of shortness of breath and chest pain further increase suspicion, making PE an important diagnosis to rule out.
3. **Anxiety-related chest pain –** Adolescents commonly present with chest pain related to anxiety or stress. Symptoms such as chest discomfort, dizziness, shortness of breath, and nausea can occur without an underlying organic cause. This remains a diagnosis of exclusion after more serious etiologies are ruled out.
4. **Viral illness/pleuritis –** Viral infections can cause pleuritic chest pain and systemic symptoms such as headache and nausea. However, the absence of fever, cough, or upper respiratory symptoms makes this less likely, though still possible early in the course of illness.
5. **Myocardial infarction -** MI is highly unlikely given the patient's young age, absence of significant cardiovascular risk factors, and atypical chest pain that is reproducible with palpation. Additionally, there is no radiation of pain or associated symptoms such as diaphoresis or syncope. However, it is still considered in the differential for chest pain and can be reasonably excluded with a normal EKG and troponin.

Plan

- POC Covid/Flu swab
- EKG
- CXR – r/o pneumonia, pneumothorax
- Labs
    - D-dimer
        - If elevated, proceed with CTA
    - Troponin

    - BNP
- Continue monitoring, serial vital signs
- Start NSAIDs for suspected costochondritis. May continue Tylenol for additional pain control PRN.
- Encourage rest and avoidance of activities that worsen pain
- If workup is negative and patient remains stable, can discharge home. Follow up with PCP/pediatrician within 1-2 days.
- Educate patient to return to ED if symptoms worsen or persists.

Reassessment Labs:

- POC Covid/Flu: negative
- D – dimer: 0.28 mcg/mL FEU (low)
- Troponin: 6 ng/L (low)
- BNP: 18 pg/mL (low)
- EKG: normal sinus rhythm at 75 bpm, normal axis, normal PR, QRS, and QTc intervals. Negative ST segment elevation or depressions, no T wave inversions.
- CXR: clear lung fields bilaterally. No focal consolidation, pleural effusion, pneumothorax noted. Mild cardiomegaly with cardiothoracic ration ~ 52% noted.