Clinical Case Conference

Acute Idiopathic Pericarditis with Associated Unilateral Pleural Effusion

Dr. Sarah Chen, MD

Department of Internal Medicine
Nimbus University Hospital

August 4, 2026

Patient History & Demographics

Initial Presentation – Emergency Department

Patient Demographics

Name:	Jonathan M. Reeves	**Age:**	47 years
MRN:	NH-2026-08471	**Sex:**	Male
Admission:	14 July 2026, 22:45	**Race/Ethnicity:**	Caucasian

Chief Complaint

"I have sharp chest pain that gets worse when I lie down. It started this morning and keeps getting worse. I also feel short of breath."

Key History

- **Onset:** Sudden, $\approx$ 14 hours prior
- **Character:** Sharp, pleuritic
- **Relieving:** Sitting forward

Physical Examination & Vital Signs

Admission Assessment – 14 July 2026, 23:10

Vital Signs

Temp:	38.2 °C
HR:	104 bpm
BP:	128/82 mmHg
RR:	22/min
SpO_2:	94% (RA)
BMI:	27.4 kg/m^2

Auscultation

Physical Examination

System	Findings
General	Alert, sitting forward, appears uncomfortable
HEENT	Normocephalic, pharynx clear
Cardiovascular	Tachycardic, regular rhythm, friction rub present
Respiratory	Decreased breath

Radiological Imaging

Chest Radiograph & Echocardiogram – 15 July 2026

Chest X-Ray (PA & Lateral)

- **Cardiac silhouette:** Enlarged, globular configuration suggestive of pericardial effusion
- **Right costophrenic angle:** Blunted with meniscus sign – moderate unilateral pleural effusion ($\approx 400\,\text{mL}$)
- **Lung fields:** Clear bilaterally, no infiltrates or masses
- **Mediastinum:** Normal contours, no lymphadenopathy
- **Bony thorax:** No acute fractures or

Transthoracic Echocardiogram

- **LV function:** Normal, EF 58%
- **RV:** Normal size and function
- **Pericardium:** Small circumferential pericardial effusion ($\approx 8\,\text{mm}$ posterior, no tamponade physiology)
- **Valves:** No significant abnormalities
- **IVC:** Normal size, $> 50\%$ collapsibility

Laboratory Results

Admission Blood Work – 15 July 2026, 00:30

Serum Chemistry & Hematology

Test	Result	Reference Range	Flag
WBC	14.2 K/μL	4.0–11.0	H
Hemoglobin	14.1 g/dL	13.5–17.5	
Platelets	312 K/μL	150–400	
CRP	128 mg/L	< 5.0	H
ESR	78 mm/hr	0–15	H
Troponin-I	1.84 ng/mL	< 0.04	H
CK-MB	4.2 ng/mL	< 5.0	
BNP	92 pg/mL	< 100	
Creatinine	0.92 mg/dL	0.7–1.3	
AST	34 U/L	10–40	

Differential Diagnosis

Ranked by Clinical Probability

Diagnostic Assessment

Diagnosis	Supporting Evidence	Refuting/Uncertain
Acute Idiopathic Pericarditis	Pleuritic pain, friction rub, CRP/ESR, effusion on echo	Requires exclusion of secondary causes
Myopericarditis	Elevated troponin-I, normal LV function	CK-MB normal, no ECG ST changes
Pulmonary Embolism	Pleuritic pain, tachycardia, pleural effusion	No risk factors, Wells score 1.5 (low)
Acute Coronary Syndrome	Chest pain, elevated troponin	Pain is positional/pleuritic, ECG

Treatment Plan & Management

Evidence-Based Approach – ACC/AHA Guidelines

Pharmacologic Therapy

Agent	Regimen
Ibuprofen	600 mg PO q8h × 14 days with PPI
Colchicine	0.6 mg PO BID × 3 months
Pantoprazole	40 mg PO daily (GI prophylaxis)

Non-Pharmacologic

- **Activity:** Strict bed rest with head-of-bed elevated to 30°, avoid supine positioning
- **Diet:** Cardiac diet (2 g sodium restriction)
- **Fluids:** 1.5 L/day restriction while effusion present
- **Oxygen:** Titrate to $SpO_2 > 92\%$
- **Pain:** Reassess q4h using numeric rating scale

Summary & Discharge Planning

Multidisciplinary Care Coordination

Case Summary

47-year-old male with no significant cardiac history presenting with **acute pleuritic chest pain**, found to have **pericardial friction rub**, elevated inflammatory markers (CRP 128 mg/L, ESR 78 mm/hr), elevated troponin-I (1.84 ng/mL), and imaging consistent with **acute pericarditis** with small pericardial effusion and reactive right-sided pleural effusion. Initiated on guideline-directed NSAID + colchicine therapy. Myopericardial involvement warrants 48-hour telemetry observation.

Follow-Up Plan

- Cardiology clinic: 1 week post-discharge

Consulting Services

- **Cardiology** – Dr. Marcus Okafor, attending

g autoimmune