JNP

Women with Rheumatoid Arthritis: The Unspoken Risk Factor

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CASE PRESENTATION

A 44-year-old white woman (JC) with a history significant for rheumatoid arthritis (RA) presented to the emergency room complaining of progressive, exertional, pleuritic, chest pain with near syncope for 3 days.

HISTORY AND PHYSICAL EXAMINATION

Additional past medical history was significant for hypothyroidism, esophageal lesions, and pericarditis. The patient had no known drug allergies and was currently taking the following medications: Synthroid (AbbVie Inc., Chicago, Il, USA), 100 mg daily; prednisone, 5 mg daily; celecoxib, 200 mg daily; Azulfidine (Pharmacia and Upjohn company, New York, NY, USA), 1,000 mg twice daily; and fish oil, 1,000 mg twice daily.

Social History

The patient denied tobacco, alcohol, or illicit drug use; is married with children; and works from home.

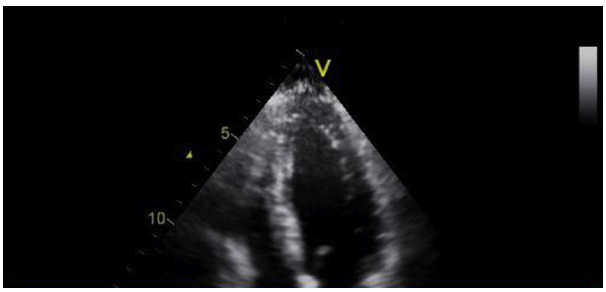
Family History

The patient's family history was significant for hypertension and a cerebral vascular accident.

Examination

Vital signs: afebrile, heart rate = 110, blood pressure = 130/88, respirations = 24 per minute, height = 65 inches, weight = 173 lb, body mass index = 27.9.

General: 44-year-old female in acute distress secondary to chest pain



HEENT: pupils equal and reactive, extraocular movement's intact, nose and throat clear

Neck: no jugular venous distention or bruits noted

Lungs: clear to auscultation bilaterally

Heart: tachycardia, S1, S2, no murmurs, rubs, or gallops

Abdomen: soft, obese, bowel sounds auscultated in all 4 quadrants

Extremities: warm, no edema, distal pulses palpable

Neurologic: nonfocal

Musculoskeletal: nonfocal

DIAGNOSTIC EVALUATION

Laboratory Values

Cardiac enzymes were drawn upon arrival and every 6 hours for 48 hours. Troponin I levels were serially 15.40, 15.0, and 12.20 (normal ranges: 0.00-0.05 ng/mL); creatine kinase-MB levels were also elevated. The D-dimer level was 1.14 (normal < .59 ng/mL), and the erythrocyte sedimentation rate was 42 (normal ranges: 0-20 mm/h). The total cholesterol was 181 (normal ranges: 0-200 mg/dL), the low-density lipoprotein level was 125 (optimal < 100 mg/dL), the high-density lipoprotein level was 38 (optimal > 40 mg/dL), and triglycerides were 147 (optimal < 150 mg/dL).

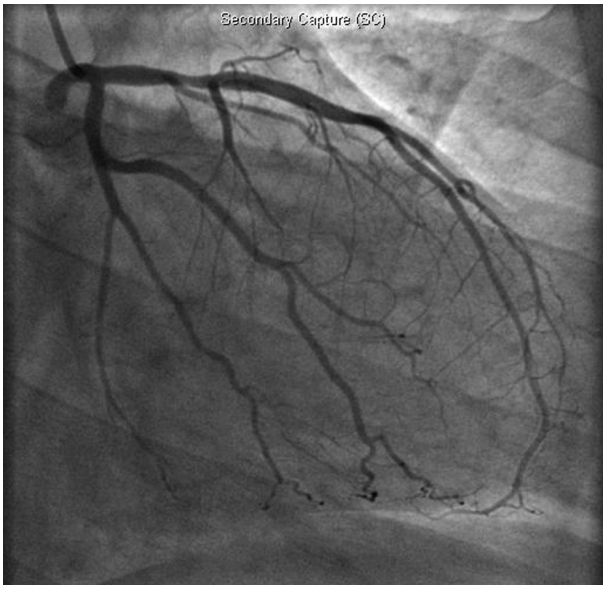
Noninvasive Cardiac Testing

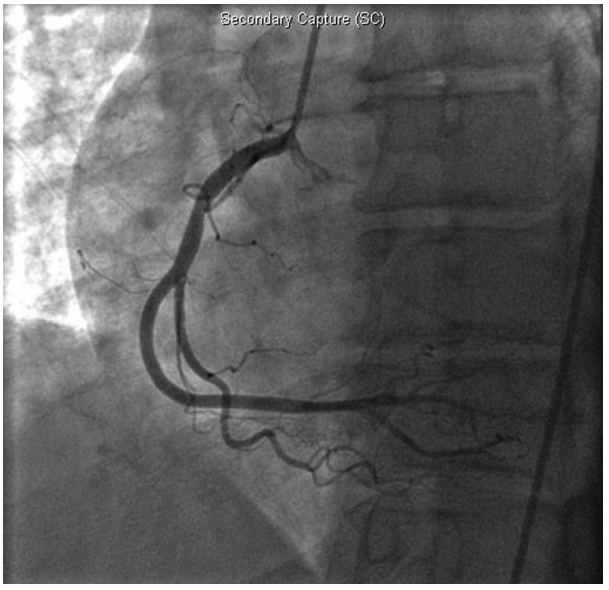
The presenting electrocardiogram indicated normal sinus rhythm with isolated premature contractions and normal R-wave progression with 1 to 1.5 mm ST elevation in precordial lead I. The remaining serial electrocardiograms throughout the 72-hour admission showed normal sinus rhythm. A 2-dimensional echocardiogram revealed a normal left ventricular size and ejection fraction percentage with an akinetic to dyskinetic midbasal septum. Lexiscan myocardial stress imaging showed a normal left ventricular dimension with a marked reduction in tracer uptake involving the midbasal septal wall with minimal reversibility. A left ventricular ejection fraction of 50% was estimated.

Again, the midbasal septal wall revealed severe hypokinesis to akinesis.

Invasive Cardiac Testing

In light of the clinical presentation, a significant rise in troponin I, and abnormal imaging findings, the patient underwent left heart catheterization. The left heart catheterization revealed an ejection fraction of 65% without wall motion abnormality. Coronary circulation was found to be right dominant. The left main, circumflex, and right coronary artery were all found to be angiographically normal. Only a smooth narrowing of 30% was found in the proximal left anterior diagonal.





Case Study Questions

1. Based on the information provided, what is the most likely diagnosis for this patient?
2. Why should RA be considered another risk factor for sudden cardiovascular disease (CVD) events?
3. What are other factors surrounding RA that can contribute to CVD in women?
4. What important management and screening should be considered in this patient population?

Think you know the answers to these questions? Test yourself and then go to page 845 to read the answers