



Atypical presentation of myocardial infarction

Quickly recognizing unusual symptoms can save lives.

By Kelly Bouthillet, DNP, APRN, CCNS, ACNP-BC, ACNPC

Ms. OPAL JOHNSON*, a 75-year-old African American, is admitted for cellulitis of the leg related to a nonhealing wound. After an uneventful night in the hospital, she's tired and refuses breakfast. Ms. Johnson's past medical history includes hypertension, type II diabetes, hyperlipidemia, and obesity (BMI 32).

History and assessment

On rounds, Wendy, Ms. Johnson's nurse, finds her patient breathing shallowly. Ms. Johnson says she feels "exhausted," like she has just "run a marathon." She's also nauseated and dizzy when walking to the bathroom, symptoms that started during the night. Ms. Johnson's vital signs are heart rate (HR) 55 beats per minute (bpm), blood pressure (BP) 118/60 mmHg, respiratory rate (RR) 26 breaths per minute with an oxygen saturation (SPO₂) of 88% on room air, and temperature 97.8° F (36.5° C). Ms. Johnson says that she feels like she "can't take a deep breath" but denies chest pain.

Wendy finds no adventitious breath sounds, stridor, or cough on physical exam and no evidence of new peripheral edema, although Ms. Johnson's skin is cool and diaphoretic. Wendy places Ms. Johnson, who is becoming anxious, on 2 L of oxygen via nasal cannula and raises the head of the bed to 45 degrees for better lung expansion.

Call for help

Wendy determines that Ms. Johnson's symptoms aren't related to her cellulitis and that her condition is worsening. When Ms. Johnson indicates that she has a "fullness in her neck," Wendy activates the rapid response team (RRT).

On the scene

When the RRT arrives, Wendy gives a clear account of the events. STAT chest x-ray and 12-lead electrocardiogram (ECG) are ordered. The ECG shows ST-segment elevation in leads II, III, and aVF with reciprocal changes in I and aVL. The team leader pages the cardiologist on

call while Wendy rechecks Ms. Johnson's vital signs: HR 52 bpm, BP 90/58 mmHg, RR 24 breaths per minute, and SPO₂ 92% on 2 L of oxygen. Ms. Johnson's blood is drawn for cardiac troponin levels, complete blood count, and basic metabolic panel. Wendy verifies that Ms. Johnson doesn't have any allergy to contrast medium, gives her 325 mg of aspirin per the RRT chest pain protocol, and provides a one-time 250 ml I.V. normal saline fluid challenge, which improves her systolic BP slightly.

Outcome

The cardiologist arrives and explains to Ms. Johnson that she's having an ST-segment elevation myocardial infarction (STEMI) of the inferior wall of the left ventricle. He explains that she'll need a procedure to the right coronary artery to minimize heart muscle damage. Ms. Johnson is taken to the cardiac catheterization lab less than 30 minutes after Wendy recognized the STEMI symptoms.

Education

Ms. Johnson's presentation and 12-lead ECG were typical of an acute inferior myocardial infarction. Cardiovascular disease remains the leading cause of death in women, but it's often underrecognized because of atypical symptoms. Unlike men, who frequently display the classic signs of chest, jaw, and arm pain, women may experience vague symptoms that are inconsistent with cardiac events. Nurses should be aware that women may not complain of classic signs such as chest pain during an acute cardiac event. This is especially true of older women, women of color, and women with comorbid conditions. ★

*Names are fictitious.

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