Common Complaint of Unusual Fatigue and Chest Pressure

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Clinical Overview

Despite general acknowledgement of the sex specific differences in symptom presentation during MI, women do not receive equal, or sufficient response to cardiovascular symptoms because women arrive with complaints differing from the male norm.

History

JL is a 63 year old woman, G3, P3, who has been complaining of unusual fatigue, insomnia, and some vague chest pressure when she is anxious or climbing stairs. Her father died of a ruptured aortic aneurysm at age 62, and her mother had hyperlipidemia, type 2 diabetes, and obesity. Three of siblings, all sisters, have hyperlipidemia, hypertension, and migraine headaches. When JL transitioned through menopause, she used estrogen therapy for about 5 years to control hot flashes and insomnia. She now uses vaginal estrogen for dryness, but has discontinued systemic estrogen. She uses NSAIDs daily for Osteoarthritis symptoms. She has been on medication to manage hypertension since age 45. Her meds include: Metoprolol XL, 100 mg daily; Hyperchlorothiazide 25 mg daily; Simvastatin 10 mg daily.

Vital Signs

- Height: 5’8”
- Weight: 235 lb [BMI: 36, Waist Circumference 41”]
- BP: 132/82
- Pulse: 72 and regular

Laboratory Evaluation

- Hgb: 14 g
- WBC: 7500
- Total Cholesterol: 203, HDL: 35, LDL: 132
- Cardiac Sensitive CRP: 5.3
- TSH: 1.5
- Dexa Scan: T-score of 1.0 at spine; -1.7 at hip
- EKG: Normal sinus rhythm, no evidence of ischemia

Physical Exam

JL is a pleasant, obese woman showing some anxiety over her symptoms and wondering if they are cardiac-related. Lungs are clear, and heart shows regular sinus rhythm without murmurs. Neck shows no thyromegaly or bruits or venous distention. Abdomen and pelvic are normal. She has a scar on her left knee from a joint replacement.

Assessment

Because of the patient's family history, risk factors, and concern over a cardiac cause of her chest pain, a stress echo cardiogram, and a cardiac catheterization were performed. When these basic tests showed no pathology, her Women's Health cardiologist, still concerned about cardiovascular disease, injected acetylcholine into her coronary vessels during her heart catheterization. Immediately her vessels went into spasm and she experienced severe chest pain, nausea, diaphoresis and shortness of breath. Her EKG showed strain and T wave elevation. Nitroglycerin, 0.3 mg SL q 5min. x 3 was required to reverse the spasm and bring the symptoms into control. The EKG changes were transient and soon returned to her baseline.

Discussion

Coronary artery disease kills more women annually than cancer and AIDS and accidents combined. Women are more likely to die of a second MI, and are less likely to receive invasive testing for symptoms than men. More women than men have died of CHD in every year since 1984. One of the reasons for their higher mortality rate is that women's hearts can suffer from oxygen deprivation due to vascular spasm, rather than plaque formation, which is the more common presentation in men. Spasm of the coronary arteries isn't easily recognizable on standard cardiac catheterization tests unless acetylcholine is administered to mimic the coronary spasm which causes the muscle and function compromise. Additionally, during MI, women don't always experience the crushing left anterior chest pain found in men. Their symptoms often include fatigue, jaw or neck pain, and more vague chest pressure or discomfort. In a summary of 9 large cohort studies, 37% of women and 27% of men presented without chest pain. Further, in all but one of the studies, the absence of chest pain was more common in women.

Conclusion

Much has been published concerning these differences, yet the standard of care in Emergency Departments and Cardiovascular Labs has been slow to adopt these sex specific methods of evaluation and treatment. It would be a step forward for cardiology departments and labs to incorporate new thinking in the evaluation and treatment of cardiovascular disease in women.

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