

Identification of a Progressively Worsening Cardiac Condition in a Patient Seen in a Home Health Care Environment

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Abstract The patient was a 53 year-old woman who was seen by a home health physical therapist following a lumbar spinal fusion revision surgery which was performed 2 weeks prior. In addition to low back pain, the patient had chronic bilateral shoulder, left upper extremity, chest, mid-back, and lower extremity pain and required moderate assistance for transfers, ambulation and activities of daily living with routine complaints of shortness of breath, lightheadedness, and fatigue. Due to concern over a progressively worsening cardiac condition, the physical therapist immediately consulted a cardiologist, who agreed to see the patient the next day. The patient was subsequently diagnosed with severe coronary artery disease and was treated with coronary artery bypass grafting, after which she was independent with all activities of daily living with only minimal complaints of low back pain.

Keywords: *cardiac, home health, surgery*

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1. Introduction

Home health care providers routinely treat patients who have underlying cardiac conditions. Therefore, it is essential for home health care providers to be highly efficient in recognizing signs and symptoms of progressively worsening cardiac conditions and appropriately refer to another health care practitioner when indicated. The purpose of this case report is to describe the clinical decision making that led a home health physical therapist to correctly identify a patient with a progressively worsening cardiac condition that required medical referral and the subsequent medical evaluation and management of the patient that led to a successful outcome.

2. Case Report

The patient was a 53 year-old woman who was seen by a home health physical therapist following a lumbar spinal fusion revision surgery which was performed 2 weeks prior. In addition to low back pain, the patient had chronic bilateral shoulder, left upper extremity, chest, mid-back, and lower extremity pain. During the previous 3 years, the patient had undergone a total of 6 lumbar spine surgeries in an effort to manage her progressively worsening low back and lower extremity pain, which had developed

insidiously 6 years earlier. However, the multiple surgical procedures provided little pain relief and the patient's function continued to decline. The patient's past medical history included mild coronary artery disease and depression and suicidal ideations due to her pain. She had an 18 pack-year smoking history. Her current medications consisted of Neurontin (300 mg twice daily), Percocet (325 mg as needed), Soma (350 mg as needed), and Xanax (0.5 mg as needed). The patient required moderate assistance to transfer from a supine to sitting position and from a seated to standing position. She was unable to ambulate without the use of a walker and required moderate assistance to ambulate 9-m. With the transfer and ambulation activities, the patient reported severe left upper extremity, chest, mid-back, and lower extremity pain, as well as shortness of breath, lightheadedness, and fatigue. Her pulse was 60 beats per minute, her blood pressure was 100/60 mmHg, and her respiration rate was 22 breaths per minute. Due to concern over a progressively worsening cardiac condition, the physical therapist immediately consulted a cardiologist, who agreed to see the patient the next day.

An electrocardiogram revealed a sinus rhythm with extensive T-wave inversion in leads V1 through V3. Further evaluation included a comprehensive metabolic panel, thyroid hormone levels, fasting lipid profile, a 24-hour Holter monitor study and a stress test scheduled in 2 weeks. However, one week after her initial cardiologist evaluation, she complained of severe chest

and mid-back pain and suffered a syncopal episode. Further evaluation through cardiac catheterization revealed 75% blockage of her left anterior descending coronary artery, 50% blockage of her left circumflex artery and 99% blockage of her right coronary artery. The patient was subsequently treated with coronary artery bypass grafting (CABG). Ten days following her CABG, cardiac rehabilitation was started in her home with the same physical therapist. The patient's only pain complaint at that time was post-surgical chest pain and low back soreness, which was now greatly improved. Interestingly, the patient reported that immediately after her CABG, she did not have any complaints of left upper extremity, chest, mid-back, lower back or bilateral lower extremity pain. Furthermore, she was now independent with transfers and activities of daily living, was able to ambulate 300-m with a single point cane without lower extremity pain, and no longer complained of shortness of breath or lightheadedness. Following her CABG, the patient was no longer taking her Percocet, Soma, or Xanax. However, she was started on Lipitor (80 mg once daily) following her CABG and she continued with the use of Neurontin when she experienced occasional lower extremity restlessness at night. She was treated by the home health physical therapist for 8 weeks and then discharged to an advanced cardiac rehabilitation program at a community hospital.

3. Discussion

In addition to chronic low back pain, the patient in this report had chronic bilateral shoulder, left upper extremity, chest, mid-back, and lower extremity pain, which was apparently thought to be mechanical in nature. Furthermore, despite multiple spinal surgical procedures and the use of several medications, the patient's condition did not improve and her function continued to decline. Following her CABG, however, the patient no longer had complaints of left upper extremity, chest, mid-back, lower back or bilateral lower extremity pain. Additionally, she was no longer taking medications for pain and anxiety and she was now independent with transfers and activities of

daily living, was able to ambulate with a single point cane without lower extremity pain, and no longer complained of shortness of breath or lightheadedness. Given the outcome of this case, it appears as if most of the patient's pain complaints, including her low back pain, were related to cardiac referral.

Death rates associated with cardiovascular disease for women have exceeded those of men for the past 30 years, and cardiac death is the leading cause of death in women. [1,2] Unfortunately, the presentation patterns of patients with myocardial infarctions varies, [3] and classic warning signs of myocardial infarction (e.g., chest pain, dyspnea) are less likely for women than men, leading to delayed diagnosis and primary management. One reason for the potentially delayed diagnosis and treatment of women is that only about half of women with a myocardial infarction have chest pain. [2] Knowledge of other possible clinical manifestations of myocardial infarction in women is critical for more timely recognition and referral.

4. Conclusion

This patient case underscores the importance of recognizing signs and symptoms of progressively worsening cardiac conditions, and appropriately referring to another health care practitioner in a timely fashion when indicated.

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