Unusual Presentation of Multiple Myeloma

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ABSTRACT

Malignancy is an independent risk factor of venous thromboembolism, although it is difficult to determine whether occult cancer is the cause of unprovoked VTE. About 25% of patients with VTE remain idiopathic. Here, the authors report the case of a 63-year-old woman with a history of unprovoked VTE some 10 months previously who presented with recurrent cough and dyspnea of 6 months duration and was finally diagnosed to have multiple myeloma.

Keywords: *idiopathic venous thromboembolism; multiple myeloma; occult cancer.*

INTRODUCTION

Venous thromboembolism (VTE) is a common and serious complication in cancer patients,[1] and nearly 10% of patients with unprovoked VTE are diagnosed to have cancer within a year of VTE diagnosis.[2] However, this does not mean that all patients with idiopathic VTE should be extensively screened for occult cancer.[3] Nonetheless, the possibility of an unrevealed comorbidity, including cancer, should be carefully considered in any patient with unprovoked VTE. Here, we report the case of a 63-year-old woman with a history of an unprovoked VTE some 10 months previously who presented with recurrent cough and dyspnea of 6 months duration and was finally diagnosed to have multiple myeloma.

CASE REPORT

A 63-year old woman presented at our clinic in a teaching hospital in Yangsan with a history of recurrent common cold and dyspnea over the previous 6 months. During this period, she visited a local clinic several times due to recurrent cough, sputum, and chilling. For 2 weeks prior to visiting our clinic, she felt that her symptoms worsened and that show had developed shortness of breath even when walking of less than 50 meters, dizziness, and general weakness.

She had been diagnosed to have osteoporosis with vertebral compression fractures of the thoracolumbar spine 4 years before presentation at a local clinic and had been prescribed bisphosphate therapy. Bone mineral density had been measured by dual-energy X-ray absorptiometry 8 months prior to this presentation and results were lower than normal (mean lumbar and femoral neck T-scores were -2.7 and -3.1, respectively). The patient rated the intensity of her daily pain at 5 on a visual analogue scale, but could continue to conduct daily activities and to farm. About 10 months before this presentation, she had visited our emergency department due to chest pain, dyspnea and epigastric discomfort. Computed tomography (CT) angiography demonstrated pulmonary artery thromboembolism

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with increased attenuation of deep vein in the right lower leg. Subsequently, she had taken rivaroxaban and a statin to treat and prevent blood clots for about 6 months. CT angiography follow-up then revealed resolution of pulmonary artery thromboembolism and deep vein thrombosis, and as a result, rivaroxaban was discontinued she was treated with statin alone.

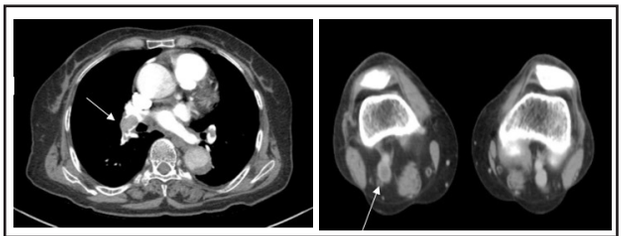

Figure 1. CT angiography showing emboli in both pulmonary arteries and deep vein thrombosis in the right lower leg (white arrows).

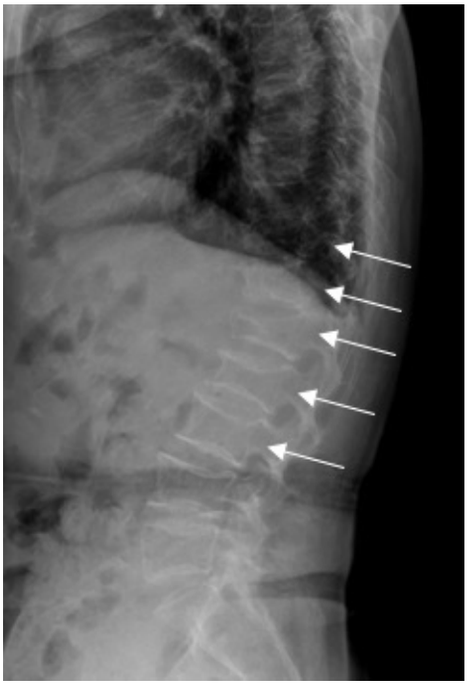

Figure 1. Thoracolumbar spine in lateral view showing multiple compression fractures at T11, T12, L1, L2, and L3 (white arrows).

At this presentation, her blood pressure and heart rate were 120/80 mmHg and 78 beats per minute, respectively. The results of a complete blood count were as follows: white blood cell count, 7,380/μL; hemoglobin, 7.7 g/dL; hematocrit, 25.4%; mean corpuscular volume platelet count, 98 fl; and platelet count 170,000/μL. Other laboratory findings were as follows: creatinine, 0.99 mg/dL; total protein, 13.0 gm/dL; albumin 2.8 g/dL; and albumin/globulin ratio, 0.27. CT pulmonary angiography and echocardiography findings were normal. A characteristic monoclonal band (M-spike, 60.6%) was found by serum protein electrophoresis in the gamma-globulin region (gamma globulin was 7.88 g/dL). Diagnosis of multiple myeloma was finally confirmed by bone marrow aspiration and biopsy.

DISCUSSION

Major risk factors of thromboembolism include surgery, trauma, hospitalization, malignant disease, central catheter or pacemaker and neurologic disease with extremity paresis.[4] Most patients with VTE have at least one of these known risk factors, but in approximately 25% of patients with first-time VTE the condition is idiopathic.[5] Solid organ neoplasms including cancers of the brain, pancreas, stomach, liver, lungs, kidneys, and colon are associated with a high risk of VTE, but hematologic malignancies, including lymphomas and myeloma, are also related.[6] The pathogenesis of VTE in multiple myeloma remains unclear but it may be associated with activation of procoagulant factors, acquired activated protein C resistance, and inflammation.[7]

Multiple myeloma is a disseminated malignancy of monoclonal plasma cells characterized by osteolytic lesions, anemia, hypercalcemia, and renal failure.[8] Initial approach for diagnosis of early multiple myeloma may be delayed because of a lack of signs or symptoms, although symptomatic patients usually complain of bone pain, such as, low back pain, symptoms of hypercalcemia due to bone resorption, fracture, or anemia.[9]

Our patient had a history of idiopathic pulmonary thromboembolism and at presentation at our clinic, complained of frequent common colds and dyspnea. Initially she was suspected of having recurrent DVT, but anemia and a low albumin/globulin ratio were then found. She was diagnosed with multiple myeloma based on serum protein electrophoresis and bone marrow biopsy results. In unprovoked VTE, occult comorbidities, including hematologic malignancies, should be considered, and it is essential for physicians to conduct careful evaluations to unearth unrevealed risk factors including cancers like multiple myeloma. In this regard, we report a case of multiple myeloma with history of unprovoked VTE.

Conflicts of Interest: None.

Consent: JNMA Case Report Consent Form was signed by the patient and the original is attached with the patient chart.

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