

Recurrent Venous Thromboembolism as the Initial Clinical Presentation of Gastric Cancer: A Case Report

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ABSTRACT

Pulmonary thromboembolism (PTE) is a clinically critical disease, misdiagnosis or delayed diagnosis of which can lead to increased rate of mortality. For prevention of recurrence of PTE, recognition of its risk factors or underlying diseases is of great importance. PTE is common in patients with cancer and has high morbidity and mortality rates. Although cancer is a lethal condition, PTE accelerates death in these patients. In the current study, we reported the case of a 50-year-old male presenting with dyspnea, pleuritic chest pain, and non-massive hemoptysis indicating pulmonary embolism. Anticoagulant therapy was initiated, but after 12 days of treatment, new deep vein thromboses in the left upper and right lower limbs were diagnosed. However, no specific risk factors or laboratory abnormalities were detected. History of weight loss during the recent months encouraged further investigation for ruling out malignancy, which led to diagnosis of gastric adenocarcinoma. He did not have any complaints of gastrointestinal disorders.

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Introduction

Acute pulmonary thromboembolism (PTE) is a life-threatening condition requiring emergent treatment. This condition is characterized by obstructive thrombosis of the pulmonary artery (1-3). The clinical presentation of acute PTE ranges from mild dyspnea to cardiac arrest; however, due to the wide variations in its clinical presentation it is easy to misdiagnose. The short-term mortality pattern of PTE ranges from 1% in hemodynamically stable patients with non-massive PTE and no signs of right heart overload to over 90% in patients presenting with cardiorespiratory arrest (4).

Risk factors for thrombus formation include perioperative state, prolonged bed rest, anti-phospholipid syndrome, cancer, hereditary thrombophilia, and some chronic inflammatory diseases (1, 2). Cancer-associated thrombosis is an important problem, and thromboembolism is a well-recognized complication of cancer. In a

population-based study, cancer was associated with a 4.1 fold greater risk of thrombosis (4-7). In this study, we presented a case of PTE and recurrent deep vein thrombosis in spite of receiving adequate treatment.

Case Presentation

A 50-year-old male was admitted for dyspnea, pleuritic chest pain, and three episodes of non-massive hemoptysis occurring during the recent 36 hours. He had history of common cold since a week before, which was treated symptomatically. Furthermore, two weeks before admission he had taken a journey lasting about 48 hours causing a unilateral left lower limb edema that was left unattended. Otherwise, the patient was healthy and did not mention any particular problems in his past medical or social history. Initial evaluation was performed showing acute dyspnea non-compatible with pneumonia. No

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other alternative diagnosis better explains the illness, tachycardia, and a suspicious history of the neglected deep vein thrombosis (DVT); thus, the patient became highly probable for diagnosis of pulmonary embolism. Accordingly, computed-tomographic pulmonary angiography (CTPA) was conducted and PTE in right main pulmonary artery and sub-segmental branches of left pulmonary artery were confirmed. Anticoagulant therapy with 60 mg of LMWH (enoxaparin) twice a day was prescribed in combination with warfarin (5 mg per day) to achieve therapeutic range of INR 2.7. However, regardless of anticoagulant therapy a new presentation of swelling and tenderness along the right lower and left upper extremities from the proximal part to distal of each limb was observed. Therefore, new onset deep vein thrombosis was detected in both extremities proven by arterial-venous color Doppler ultrasonography.

Venous thromboembolism (VTE) occurred while receiving anticoagulant treatment, and reevaluation seemed to be mandatory; thus, a more accurate history was obtained, and we found out that the patient had lost about 10 kg during the recent months not accompanied with any significant symptoms and complaints.

The recurrent VTE events besides weight loss increased suspicion for existence of an underlying occult malignancy although the patient did not have any para-clinical findings indicating a special malignancy. A normal chest X-ray, Lung high-resolution computed tomography, normal abdominopelvic ultrasonography, and computed tomography scan were found. Finally, the patient became a candidate for upper and lower gastrointestinal endoscopy. First, upper endoscopy was carried out and a large ulcer with malignant view was reported in the gastric body proximal to the lesser curvature. Multiple biopsies were taken for pathologic study, which was compatible with signet ring adenocarcinoma. Due to VTE accompany cancer and chemotherapy, anticoagulant therapy was continued until the occurrence of any contraindications. Furthermore, due to recurrent VTE, the patient was candidate for indwelling inferior vena cava filter.

Discussion

Concomitant DVT and acute pulmonary thromboembolism is known as VTE. VTE is a common complication of malignancy, and an association between VTE and malignancies has long been confirmed. Despite appropriate treatment, pulmonary thromboembolism (PE) has a high rate of mortality in patients with cancer (3, 4) since cancer patients often have a hyper-coagulability state due to production of substances with procoagulant activity (e.g., tissue

factor and cancer procoagulant) (4, 5). In most cases, thromboembolic events occur in the setting of a clinically evident malignancy. Nevertheless, some cancer patients have concomitant PTE. In spite of high frequency of VTE in cancer patients, it should be borne in mind that most of these patients do not develop VTE. Clinically apparent VTE occurs in up to 10% of patients with cancer. Autopsy series described even higher rates of thrombosis for certain tumor types although previous studies reported 10-30% thromboembolism in gastrointestinal malignancies (5, 7, 8).

Patients with VTE are high-risk population for malignancy. Symptoms, prognosis, and development of VTE were observed more frequently in malignant patients compared to non-malignant cases. Risk of VTE in cancer patients is affected by several factors such as tumor-specific factors, anatomic factors (e.g., location and stage), and chemotherapy. Patients with recurrent VTE without obvious thrombophilia must be evaluated for occult cancers. In addition, acute VTE may be the first manifestation of an occult cancer, and patients presenting with recurrent VTE are more likely to have underlying malignancies (8).

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Conflict of Interest

The authors declare no conflict of interest.

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