Esophagitis-Related Gastrointestinal Bleeding with Concurrent Pulmonary Embolism: A Therapeutic Challenge

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INTRODUCTION

Major gastrointestinal (GI) bleeding occurs in approximately 0.9% of patients receiving anticoagulation for venous thromboembolism (VTE).[1] Managing a GI bleed in the setting of concurrent pulmonary embolism (PE) presents a major therapeutic challenge, balancing bleeding and thrombotic risks. We present a case of a non-major esophagitis-related upper GI bleed in a patient with simultaneous PE and upper extremity DVT, underscoring the complexity of clinical decision-making in such cases.

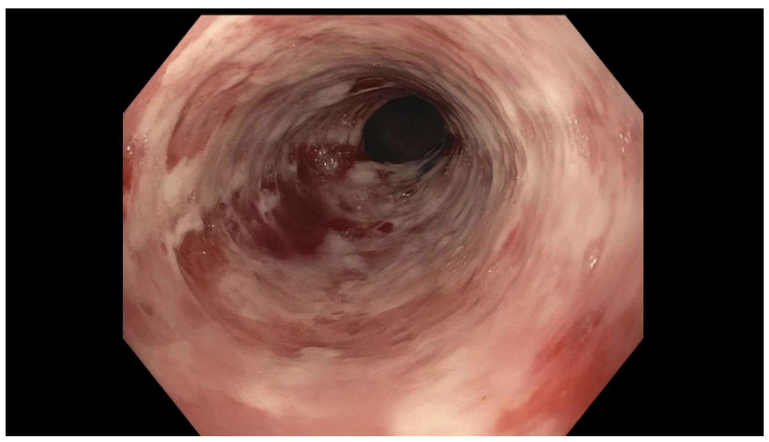
CASE PRESENTATION

A 70-year-old male with hypertension, hyperlipidemia, and a left above-the-knee amputation secondary to prosthetic joint infection was brought from his rehabilitation facility with hypotension (SBP 70 mmHg) and lethargy. He was afebrile, tachycardic, and tachypneic, with a lactate of 10.6 mmol/L and creatinine 1.7 mg/dL (baseline 0.8). CT thorax revealed a left lower lobe consolidation consistent with pneumonia. He was treated for sepsis with cefepime and vancomycin, showing clinical improvement except for persistent disorientation.

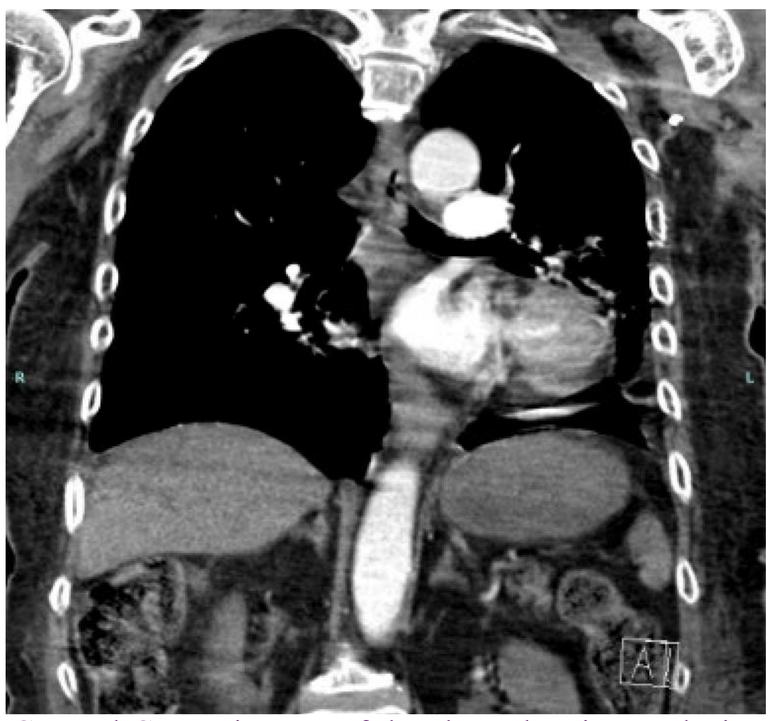
On hospital day 6, he developed right upper extremity swelling. Ultrasound revealed thrombosis of the right axillary, brachial, and basilic veins. CT pulmonary angiogram showed a segmental occlusion in the left upper lobe pulmonary artery, confirming a pulmonary embolism. Right lower extremity duplex ultrasounds were unremarkable for DVT. Echocardiography showed normal right ventricular function, and he was deemed to be intermediate-low risk with a simplified pulmonary embolism severity index (sPESI) score of 1. Anticoagulation with apixaban 10 mg twice daily was initiated.

On hospital day 8, he developed melena with a hemoglobin drop from 8.6 to 6.3 g/dL and no signs of hemodynamic instability, consistent with a major bleed, and received 1 unit of pRBC. Apixaban was held, and EGD revealed LA Grade D esophagitis with active bleeding and gastritis. He was started on IV pantoprazole 40 mg twice daily. Though he continued to have persistent melenic stools, his hemoglobin improved back to his baseline. His right arm swelling remained but there was no return of any pulmonary signs or symptoms throughou the remainder of the hospital course. On hospital day 14, he was discharged to a skilled nursing facility on oral pantoprazole 40 mg twice daily with plans for repeat EGD in three months.

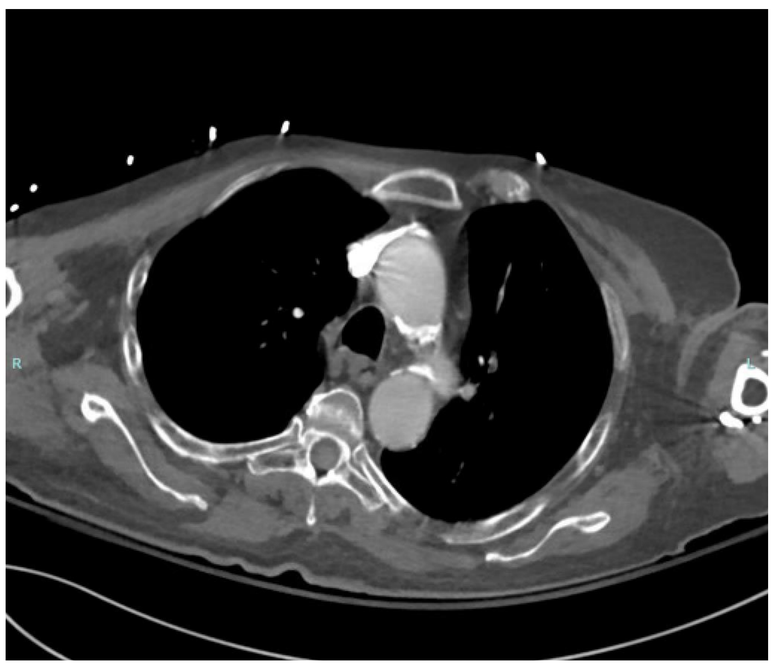
IMAGES



EGD image of the middle third of the esophagus



Coronal CT angiogram of the chest showing occlusion of the left upper lobe pulmonary artery



Axial CT angiogram of the chest showing occlusion of the left upper lobe pulmonary artery

DISCUSSION

- The occurrence of concurrent PE/VTE and GI bleeding is a therapeutic challenge balancing hemorrhagic control and thrombosis prevention. GI bleeding is seen in 0.9% of anticoagulated VTE patients with associated high short-term morbidity and mortality.[2]
- Systematic reviews suggest temporary anticoagulation withdrawal in active bleeding with careful reinitiation once hemostasis is achieved, and this results in improved survival and fewer thromboembolic occurrences, but at the cost of mild rebleeding risk.[3,4]
- Observational data supports withholding anticoagulation in active GI bleeding with observation and multidisciplinary discussion, given there is no hemodynamic instability.[5]
- This case supports conservative, observation-based management of PE during active GI bleeding, with individualized evaluation, close monitoring, and early reevaluation of anticoagulation requirements once bleeding is controlled.

CONCLUSION

This case shows the delicate balance that must be achieved in managing PE in the context of an acute GI bleed. Holding anticoagulation temporarily, and close monitoring and management of the source, can be both safe and effective in low to intermediate-low risk PE patients. Multidisciplinary involvement and individualized treatments remain the most significant factors in optimizing outcomes for such clinical scenarios.

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