**Spontaneous hemopericardium as a complication of rivaroxaban therapy**

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Objective:

-to increase awareness that spontaneous hemopericardium could be caused by anticoagulation use in a patient with autoimmune disease

Spontaneous hemopericardium could be caused by anticoagulant use in a patient with autoimmune disease. We present a case of an 82 y/o female who presented to the emergency department with sob and chest pain. A week ago, she was started on metoprolol and rivaroxaban for newly diagnosed atrial fibrillation. Other past medical history included seronegative polymyositis diagnosed 5 years ago. During that time she also had a cardiac catheterization for elevated troponin levels that revealed a minimal non-obstructive coronary artery disease. Since then she was treated with immunosuppressants for 3 years and her polymyositis remained in clinical remission. Upon presentation, her physical examination showed tachycardia, irregularly irregular rhythm, and elevated JVD with no pericardial rub. Laboratory tests showed hemoglobin of 12.1 mg/dL, ESR of 42 mm/hr, CRP of 8.3 mg/dL, aldolase level of 10.0 U/L, normal CK and myoglobin levels. Chest x-ray showed moderate cardiomegaly. Electrocardiogram confirmed atrial fibrillation with ventricular rate of 120/min. Echocardiogram showed a large pericardial effusion. Rivaroxaban was discontinued and a bedside pericardiocentesis was performed to drain the pericardial effusion, presumed to be due to the pericardial involvement of polymyositis. However, pericardiocentesis revealed dark bloody fluid suggestive of hemopericardium; 780 ml of bloody fluid was drained following placement of a catheter in the pericardial sac. Pericardial fluid analysis showed Hct of 20, many RBCs, rare WBCs, and normal pH, glucose, protein, LDH, and amylase levels; cytology was negative for malignant cells. Patient was discharged from the hospital in a stable condition without any further plans of restarting anticoagulation. During a 3-week follow-up, a limited echocardiogram showed complete resolution of the pericardial effusion. Hence, spontaneous hemopericardium due to rivaroxaban is a rare entity. Although the pericardium could be involved in autoimmune diseases, it is crucial to consider hemopericardium in anticoagulated patients to prevent morbidity and mortality.