Case Report

The risk-benefit balance of anticoagulant treatment: case report

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Abstract: *A 76-year-old female presents at the emergency department with dyspnea and pleuritic, sharp right laterothoracic pain that started suddenly. Her medical history includes stage 2 hypertension, diabetes mellitus type 2, chronic obstructive pulmonary disease stage IV GOLD with home oxygen therapy, chronic pulmonary heart disease, diffuse interstitial lung disease with a previous episode of alveolar hemorrhage, chronic renal disease stage 2, and paroxysmal atrial fibrillation, for which she had a Watchman device implanted, taking into consideration her anticoagulation contraindication due to the previous alveolar hemorrhage episode. The biological findings reveal hypoxemia and hypocapnia, a positive D-dimer test, an inflammatory syndrome, mild hypopotassemia, acute decompensation of chronic renal disease, and a positive urine culture with Enterococcus faecium. Emergency thoracic computed tomography reveals bilateral pulmonary thromboembolism. Immediate parenteral anticoagulation and antibiotic therapy are initiated with favorable evolution. At discharge, concerning the risk-benefit balance of anticoagulation in a senior patient with multiple comorbidities, the anticoagulant therapy is changed to a novel oral anticoagulant for at least three months, with reevaluation needed after that period.*

Keywords: *thromboembolism, warfarin, stroke, atrial fibrillation.*

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Introduction

Thrombosis is the formation of a blood clot that causes complete or partial blockage within an arterial or venous vessel, limiting normal blood flow. In developing countries, this pathology is associated with the three most common causes of death: myocardial infarction, stroke, and pulmonary embolism [1]. The mainstay of treatment for this spectrum of pathologies is anticoagulation.

Jay McLean discovered the first anticoagulant, unfractionated heparin, in 1916; it was the only substance used until 1940, when Warfarin, a compound that inhibited the synthesis of vitamin K-dependent coagulation factors II, VII, IX, and X, become available [2]. After 1980, new research on the coagulation cascade led to the development of novel oral anticoagulants that target the X factor [2].