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RESEARCH ARTICLE

RARE CASE OF SPONTANEOUS HEMOPERICARDIUM IN A PATIENT RECEIVING APIXABAN: CASE REPORT

El Bouanani Alaa Eddine and Abbou-Ou-Cherif Yousra
Cardiology Department, Chartres Hospital Center, France.

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Abstract

Apixaban is a new oral anticoagulant (NOAC) available since 2012, indicated particularly for the prevention of embolic events in patients with non-valvular atrial fibrillation [1]. It is a direct inhibitor of factor Xa, with a half-life of around 12 hours. This new anticoagulant is associated with a lower risk of bleeding than vitamin K antagonists (VKAs) such as warfarin and requires less monitoring [2]. However, several recently published cases have demonstrated a correlation between Apixaban and the occurrence of pericardial effusion. We report the case of a 75-year-old hypertensive man diagnosed with atrial fibrillation 3 months ago, treated with Apixaban 5mg twice daily. He presented to the emergency department with rapidly worsening dyspnea, and echocardiography revealed a large pericardial effusion requiring drainage. A full etiological work-up was carried out, revealing no underlying pathology or triggering event to explain his pericardial effusion. We believe that his recently introduced anticoagulant therapy is the true cause.

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Introduction:-

Case report:

A 75-year-old man with hypertension was diagnosed with atrial fibrillation 3 months ago and started treatment with Apixaban 5mg twice daily. He presented to the emergency department with rapidly worsening dyspnea. On arrival, his vital signs were as follows: heart rate 120 beats per minute and blood pressure 135/70 mm Hg. Weight 76 kg, height 170 cm. On physical examination, heart sounds were difficult to detect. The electrocardiogram revealed atrial fibrillation with a rapid ventricular response (123 bpm), a normal axis, and an absence of ST-T changes. Chest radiography revealed significant cardiomegaly, and transthoracic echocardiography confirmed a large 30 mm pericardial effusion (Figure 1), with no signs of tamponade. Biological tests were within normal ranges. Given the abundance of the effusion and the risk of progression to tamponade, the patient underwent pericardial drainage, evacuating approximately 1000 mL of fluid. The fluid was red, and cytobacteriological study showed no signs of malignancy or bacterial growth. A TAP CT scan and a Pet Scan were performed as part of the etiological work-up, both of which returned normal results.

After ruling out all potential causes of pericardial effusion and considering the patient's age, the recent initiation of full-dose Apixaban was identified as the presumed cause. The patient was discharged after 7 days, and the Apixaban dosage was adjusted to 2.5mg twice daily. Follow-up echocardiograms at one week and one month revealed no recurrence, and the patient is under close outpatient monitoring by his cardiologist for any potential reappearance.

Corresponding Author: El Bouanani Alaa Eddine
Address**:** Cardiology Department, Chartres Hospital Center, France.

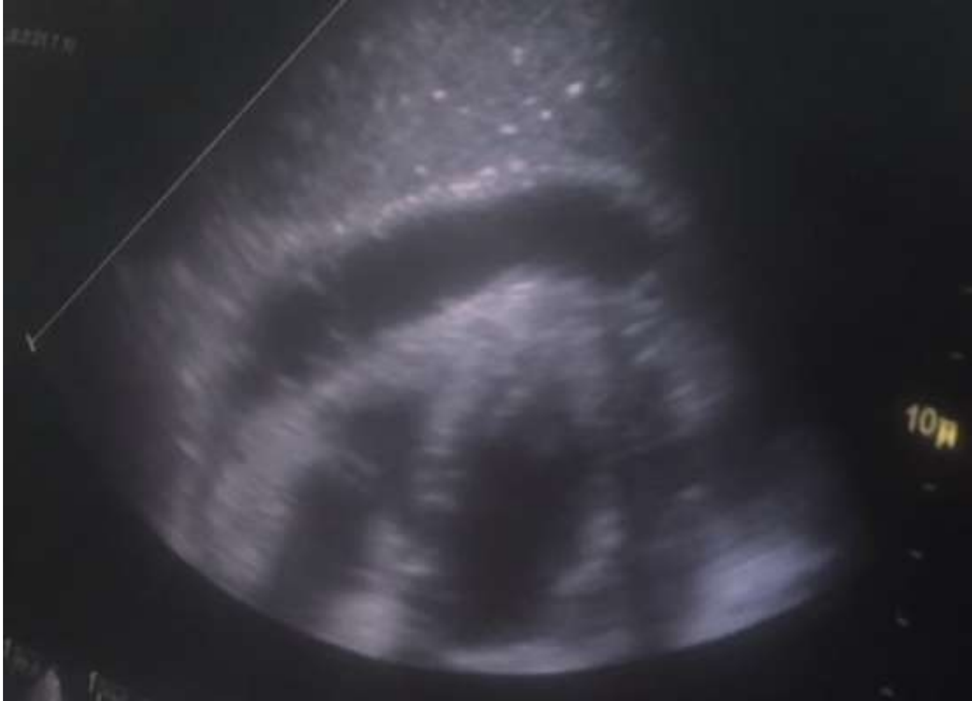

Figure 1: Transthoracic echocardiogram showing evidence of massive pericardial effusion along the right heart border.

Discussion:-

Over the past decade, direct oral anticoagulants have been increasingly used in the prevention of thrombotic events, gaining popularity over vitamin K antagonists (VKAs) due to their efficacy and ease of use. However, they are associated with an increased risk of minor and major hemorrhage. Hemopericardium, a condition most often secondary to trauma, neoplasia, or myocardial infarction, is also one of the rare but very serious side effects of direct oral anticoagulants [3]. Since their launch, a review published by Assad et al. reports 26 cases of tamponade (5 with apixaban, 12 with rivaroxaban, 9 with dabigatran) [4]. Other types of hemorrhages frequently reported are mainly digestive [5]. The first documented case of spontaneous hemopericardium on Apixaban dates back to 2015 and occurred 6 weeks after the start of treatment [6]. Risk factors associated with an increased risk of bleeding, notably the occurrence of pericardial hemorrhage, include advanced age, male gender, renal insufficiency, and coagulation abnormalities [4]. The pathogenesis is not yet known, and no study has shown a direct link between the occurrence of hemopericardium and the use of direct oral anticoagulants.

As there is still no antidote, the only means of achieving reversal is through hemodialysis for direct thrombin inhibitors or the administration of coagulation factors [7]. Thus, in patients at high risk of bleeding, cautious and recommended use, along with monitoring serum levels of Direct oral anticoagulants, could facilitate the monitoring of these patients.

Conclusion:

Reported cases of hemopericardium associated with Direct oral anticoagulants underscore the importance of carefully monitoring patients undergoing treatment, using direct oral anticoagulants more cautiously, and, above all, identifying antidotes to control the occurrence of severe bleeding following their use.

Conflict ofInterest:
No Conflict of Interest

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