T053 D-dimer is useful in the assessment of suspected recurrent venous thromboembolism in patients on rivaroxaban or apixaban

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Introduction

Rivaroxaban and apixaban are increasingly being used to treat venous thromboembolism (VTE). Whilst on these agents, the use of D-dimer in the prediction of recurrent VTE (rVTE) is yet to be established.

Aim

To assess the efficacy of D-dimer for predicting symptomatic rVTE in patients continuing to receive rivaroxaban or apixaban.

Methods

We undertook a chart review of patients on rivaroxaban or apixaban who had suspected rVTE from March 2016 to May 2019 at Monash Health, Melbourne. Only patients who had a measured anti-Xa drug level (IL Test), concurrent D-dimer (IL Test D-dimer HS) and objective imaging were included. The primary outcome measure was sensitivity and specificity of D-dimer in predicting rVTE utilising our standard D-dimer threshold of 0.23mg/l.

Results

Of 40 patients included, 50% were male. The mean age was 54 years (range 24-85) with 40% on apixaban. All patients were on prophylactic or therapeutic anticoagulation for VTE.

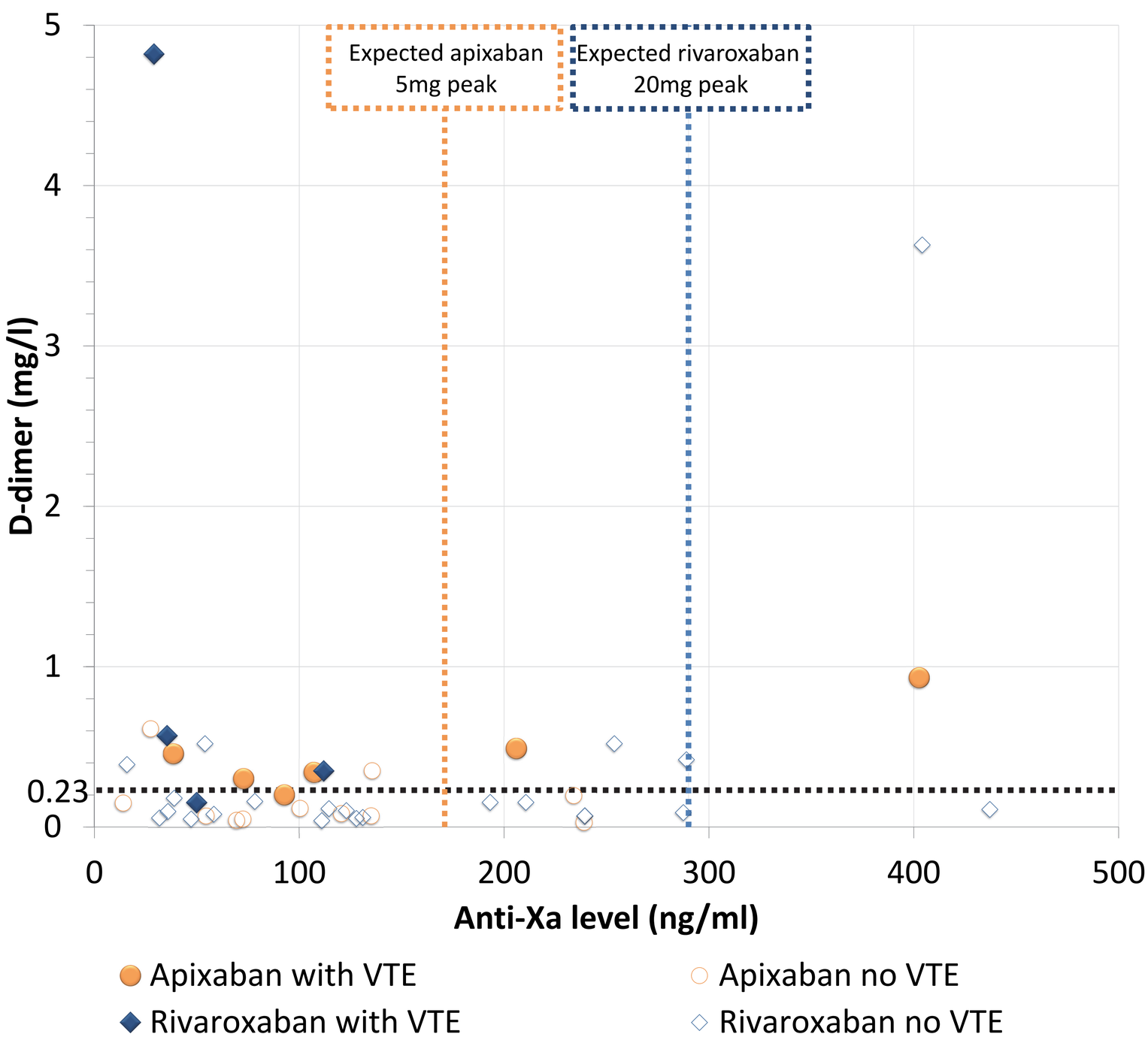
Suspected rVTE occurred at a median of 5.8 months post index VTE episode (range 0.03-100) with anti-Xa levels and D-dimer shown in Figure 1. The suspected rVTE comprised:

- 36% deep vein thrombosis
- 57% pulmonary embolism
- 7% both DVT and PE

rVTE was radiologically confirmed in 25%.

The sensitivity and specificity for D-dimer was 80% (95%CI 44-98) and 78% (95%CI 60-91) respectively. 8 cases with negative D-dimer and VTE imaging studies have not had 30-day follow-up.

Figure 1. Anti-Xa levels and d-dimer in patients with suspected rVTE



Conclusion

Our data show that in patients with suspected recurrent VTE who are taking rivaroxaban or apixaban, the IL Test D-dimer is not universally suppressed. In these patients, the routine laboratory threshold of 0.23mg/l may retain its utility in excluding recurrent VTE despite concurrent use of an anti-Xa medication.

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