

### Background:

The new oral anticoagulants – dabigatran, rivaroxaban are alternatives to warfarin for some long term indication, including the prevention of thromboembolism in non valvular atrial fibrillation and the treatment of venous thromboembolism.

As more and more patients are prescribed these drugs, we must become familiar with their mechanism of action, dosing strategies and potential complications in order to provide our patients with the safest care possible.

### Case report

We present the case of a 58 years old patient, who was brought in the ED for cough, dyspnea and hemoptysis.

His medical history revealed that he was prescribed dabigatran and amiodarone one month earlier for atrial fibrillation. The physical examination revealed multiple bruising on his chest and abdomen.

### Results

The initial bloodwork showed normal levels of hemoglobin, hematocrit, platelets; normal levels of liver enzymes; elevated creatinine, urea and potassium. The patient was admitted to the ICU, where over the course of 10 days his renal function improved, but he developed severe anemia and liver failure and subsequently died.

### Discussions

Chronic therapy with dabigatran is associated with moderate ALT elevations (greater than 3 times the upper limit of normal) in 1,5% to 3% of patients. While case reports of clinically apparent liver injury due to dabigatran have not been published, several instances of ALT elevation with jaundice occurred during several clinical trials of dabigatran. These cases were mild and self-limited, resolving completely once therapy was stopped.

In our case, we have to draw attention to the fact that the patient was also taking amiodarone and it is known that the association of dabigatran with amiodarone may have severe adverse reactions such as hemorrhage and liver failure. Also the patient was proved to be positive for hepatic E virus.

### Conclusions

We are tempt to think that the association of dabigatran and amiodarone or dabigatran with renal failure was the cause of the patient's outcome but anemia and liver failure worsened and led to the death of the patient despite prompt interruption of the anticoagulant treatment.

So the relationship of the liver injury to dabigatran therapy remains unclear.