

ABSTRACT FORM ECAT SYMPOSIUM 8 – 9 NOVEMBER 2018

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Title:

Interference of DOACs in coagulation tests

Abstract:

Because of their modes of action, DOACs also interfere with diagnostic tests for thrombophilia or bleeding disorders. Prothrombin time (and the derived INR) and the APTT are both influenced by DOACs. Depending on the reagents, the coagulometer and the DOAC used by the patient, the sensitivity of the PT/INR and the APTT may vary.

For thrombophilia testing, assays such as activated protein C (APC) resistance, antithrombin (AT), protein C, protein S, lupus anticoagulant and clotting factor assays, may be required. In these cases, testing should be performed preferably at Ctrough (i.e. 12 or 24 h after the last drug intake for bid and od, respectively) even if interferences are still possible, depending on the sensitivity of the test and the DOAC. In the light of the possibility of invalid results, the real need for these tests should be carefully evaluated in patients on DOAC treatment.

In cases of bleeding diathesis or DIC, specific tests such as fibrinogen (Clauss and PT-derived method), TT, clotting factor activity and reptilase time may also be used. Thus, physicians should be aware that false-positive or false-negative results are possible in patients receiving DOACs and can lead to diagnostic errors. There are assays unaffected by the DOACs that can be used for coagulation function testing in these patients. If the DOAC-insensitive assays cannot be used, missing one (for od dosing) or two (for bid dosing) doses could be considered to minimize the impact of residual DOACs on testing.

Interestingly, some diagnostic companies have developed strategies to remove the DOACs from the blood before testing which may facilitate the management and avoid unnecessary dose skipping.