

Title	Biology of haemostasis disorders: Thrombin time
Agency	HAS, French National Authority for Health (Haute Autorité de Santé) 2 avenue du Stade de France – F 93218 La Plaine Cedex, France Tel: + 33 (0) 1 55 93 71 13 – Fax: + 33 (0) 1 55 93 74 35 contact.seap@has-santé.fr , www.has-sante.fr
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Aim

The National Salaried Workers' Health Insurance Fund (CNAMTS) asked HAS to assess the value of the different laboratory tests for haemostasis abnormalities with a view to updating the section in the Nomenclature of Procedures in Laboratory Medicine (NABM) containing the procedures in laboratory medicine for measuring abnormalities of haemostasis (subsection 5-02). One of those tests is the thrombin time (TT), an NABM procedure, which is a global test for the investigation of fibrin formation. The TT is the clotting time of citrated platelet-poor plasma (PPP) at 37°C in the presence of thrombin. Clot formation could be detected by chronometric, electromechanical or optical methods. A test of correction by adding control plasma can be carried out: the absence of any correction in TT indicates that unfractionated heparin is present in the sample. Historically, TT was used to make a preoperative assessment of haemostasis, investigate haemorrhagic syndrome or to detect the presence of unfractionated heparin in the sample.

Conclusions and results

According to the different documents analysed, TT is not recommended for use in the preoperative assessment of the risk of haemorrhage, the investigation of disseminated intravascular coagulation (DIC), the follow-up of heparin treatments, or for the diagnosis of other disorders such as von Willebrand's disease. It is still proposed for the diagnosis of rare congenital fibrinogen abnormalities. It should be noted that it is the determination of fibrinogen which is recommended in practice, and that this determination is already an NABM procedure. In conclusion, TT is not advocated either for preoperative assessment of the risk of haemorrhage or for the investigation of haemorrhagic syndrome.

Recommendations

On the basis of the literature identified and analysed, TT has been shown to be a procedure which should no longer be used in current practice.

Methods

This assessment is based on a critical analysis of the literature carried out by the Haute Autorité de Santé, and reviewed by experts in haemostasis. It takes into account the arguments of a group of experts assembled by CNAMTS on which CNAMTS based its request. The assessment of this procedure is based on a critical analysis of the literature consisting of nine guidelines relating to disorders associated with the prescribing conditions (but no document recommending TT), and the review by three experts in haemostasis.

Written by

Aurélien Pacull, Haute Autorité de Santé, HAS, France