CLOTTING AND FIBRINOLYSIS: AN INTEGRATED TEST SYSTEM

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Aberrations in haemostasis can be detected with screening assays that cover different compartments of the haemostatic process. Screening secondary haemostastic abnormalities, either acquired or inherited, depends largely on clotting tests such as the Prothrombin Time, Activated Partial Thromboplastin Time and Thrombin Time. Limitations of these screening tests are that they only measure the initial phase of the clotting cascade (initial fibrin formation), are relative insensitive to mild coagulation abnormalities and lack the ability to detect thrombophilia. The last decade total thrombin generation or clot waveform analysis re-entered the coagulation-screening arena, which not only pay attention to coagulation initiation but also propagation/termination. Despite these advantages these “new” assays still only focus on coagulation and do not incorporate multiple components of the haemostatic balance. We have developed the Nijmegen Haemostasis Assay, which measures thrombin and plasmin generation simultaneously in one single assay. Due to this combination the effect of coagulation on fibrinolysis (such as the effect of TAFI) and vice versa can be studied in more detail. The characteristics of this assay will be discussed together with its performance with patient’s plasmas. The ultimate goal for the next decade is the generation of new sensitive screening assays applicable to monitor different compartments of the haemostatic balance in one assay.