

Thrombin Time (TT)

Principle: This is the time taken for the citrated plasma to clot after the addition of commercial thrombin in the presence of calcium.

Reagents Required

- Citrated platelet poor plasma of the patient
- Thrombin- commercial with calcium chloride
- Control plasma.

Procedure

- Pipette 0.2 mL of test and control plasma in two separate tubes.
- Incubate in a water-bath at 37°C for 1 minute.
- Add 0.1 mL of thrombin reagent to each tube and start the stop watch.
- Observe the time when the clot is formed.

Normal value: 15-19 seconds. Patient's TT should be within 2 seconds of control.

Use

- To detect decreased or abnormal fibrinogen

Interpretation: Increased in

- Hypofibrinogenemia
- DIC.

TESTS FOR FIBRINOLYTIC ACTIVITY

- **Whole blood clot lysis:** Normal blood clots do not dissolve in 24 hours. When there is increased fibrinolytic activity, the clot undergoes lysis within 30 to 60 minutes after clotting.
- **Euglobulin lysis time:** This is a quantitative measure of fibrinolytic activity. Euglobulin fraction of plasma includes plasminogen, plasminogen activators and fibrinogen. Lysis normally occurs in 2 to 4 hours. Values less than 2 hours indicate increased fibrinolysis.
- **Fibrin degradation products:** Serum/plasma of the patient is collected and latex particles coated with specific antibodies to purified fibrin degradation products (FDP) are added. Presence of agglutination suggests the presence of FDP in the serum. Semiquantitation of the FDP levels can be assessed by using different dilutions of the patient's serum.

Use: Aids in diagnosis of DIC.

- **D-dimer:** D-dimer is a specific marker of DIC than FDP.

Summary of screening tests for bleeding disorders are presented in Table 48.3.