Opening and General Introduction to Bleeding Disorders

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Careful history taking and clinical examination are essential components in the assessment of bleeding disorder. The use of laboratory tests of coagulation and hemostasis cannot substitute for clinical assessment. The primary use of coagulation testing should be to confirm the presence and type of coagulation disorder in a patient with a suspicious clinical history. There is not one assay that can predict risk of bleeding and thrombosis. The clinician must frequently use the results of assay combined with the clinical presentation to arrive at a diagnosis or an assessment of bleeding risk. Screening test are unhelpful in the prediction of bleeding risk, especially when applied indiscriminately or without knowing clinical history.

A history taken to evaluate hemostasis should be answer these questions: 1. Has the patient experienced abnormal bleeding or bruising? Does the patient have a systemic defect in hemostasis? If so, are symptoms of recent origin, suggesting an acquired disorder, or do they date back to childhood, suggesting a hereditary disorder? 2. Is there a history of an acquired disorder that could impair hemostasis? 3. Is the patient taking a drug that could interfere with hemostasis? 4. Have other members of the family bled abnormally?

Presently, physiologic hemostasis is believed to be initiated through factor VIIa and tissue factor pathway. Although this has become a cohesive hypothesis, clinical laboratory testing of the coagulation is not based on this current understanding- it follows the Ratnoff and Davies hypothesis, the coagulation cascade system. In the practice of clinical hemostasis, there are no global assay for measuring physiologic tissue factor-initiated hemostasis. The three assays most commonly used to examine the coagulation system are: 1. activated partial thromboplastin time (aPTT), 2. prothrombin time (PT) and 3. thrombin clotting time (TCT). Recognition of platelet function disorders is critical to any hemostatic evaluation. It is clinical not useful to document abnormal in a patient taking interfering medication. The screening tests for platelet are as follows, each has advantages as well as disadvantages: 1.Platelet count, 2.Bleeding time and 3.high-shear platelet function analyzer.

When faced with a bleeding patient, the physician must use an analytic diagnostic approach to determine its etiology. Most recognized bleeding states are caused by one of the three defects: a defect in platelet number or function, a defect or deficiency in a plasma coagulation protein or a defect in platelet-vessel wall interaction as in defects associated with vonWillebrand factor-vonWillebrand disease.