INTERPRETIVE GUIDE: COAGULATION TESTING ALGORITHM

PT and PTT

Both normal

Normal PT; Elevated PTT (Perform mixing study)

Elevated PT; Normal PTT

Elevated PT; Elevated PTT

Low PT; Consider DIC or traumatic venipuncture

Normal morphology, elevated PLT count

Fe deficiency, inflammation, malignancy, myeloproliferative/dysplastic disorder

CBC with PLT morphology

Normal morphology, normal PLT count

Low PLT count: Consider PLT destruction or production defect

Cause of low PLT not identified

No correction: Heparin, lupus anticoagulant/antiphospholipid antibody/anticardiolipin, factor VIII antibody

Correction: Factor deficiency; consider hematology consult

Factor VIII assay

Coumadin®; liver disease; deficiency of factor VII, X, V, or II; dysfibrogenemia; hypofibrinogenemia; antibody to factor II or V

DIC; factor X, V, or II deficiency; hypofibrinogenemia; heparin

If abnormal: von Willebrand’s disease

vWF multimer analysis

If normal, consider: Hematology consult, primary PLT disorder, dysfibrinogenemia, factor XII deficiency, α2 antiplasmin deficiency

Thrombin time

Shortened

Normal

Elevated

If low: Perform vWF multimer analysis

If normal: Perform IX analysis

Factor IX low: Hemophilia B

Factor IX normal

Factor IX deficiency

Factor IX assay

Results abnormal: von Willebrand’s disease

Results normal: Hemophilia A (perform inhibitor screen)

Factor IX normal: Perform factor XI assay

Factor XI deficiency

This algorithm is for use with patients with a history of significant bleeding/bruising out of proportion to the degree of trauma not explained by aspirin or other drug exposure or concurrent medical disease such as uremia, DIC, etc. Important medical history to consider is a familial history of bleeding disorders, consequences of surgery/dental procedures, menstrual history medication history, etc.