EDUCATIONAL OBJECTIVES
BLEEDING PATIENT CASE STUDIES

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1. Identify platelets in a peripheral blood smear.
2. Interpret the hemogram data in relation to platelet number and distribution.
3. Describe the theory behind platelet aggregation and discuss its relevance to bleeding disorders.
4. Contrast the differences between the platelet count and platelet function tests, and describe the limitations of each test.
5. Identify the qualitative and quantitative platelet related disorders by examining blood smears and interpreting platelet aggregation assays.
6. Discuss the role of platelets in the formation of the hemostatic plug to arrest bleeding.
7. Describe the coagulation factors responsible for bleeding complications (pathologic disorder vs. drug overdose).
8. Discuss how increased fibrinolytic activity can lead to bleeding (pathologic disorder vs. drug overdose).
9. Identify the screening tests for evaluating the coagulation system.
10. Describe the principle behind the Prothrombin Time (PT), Activated Partial Thromboplastin Time (APTT), and Thrombin Time assays. Identify what each test measures and discuss the relevance of each test to bleeding disorders.
11. Compare and contrast the clinical and laboratory aspects of hemophilia A and B.
12. Design a clinical work-up to differentiate between hemophilia A and von Willebrand’s disease (mild and severe cases) on the basis of patient’s history, physical exam, coagulation tests and platelet tests.
13. Recognize that von Willebrand’s disease is related to a platelet function defect and is not related to coagulation FVIII or FIX defects.
14. Recognize that DIC is associated with simultaneous bleeding and thrombosis.
15. Diagnose DIC by physical exam, medical history and lab tests.
16. Illustrate how clinical laboratory tests are used to differentiate patients with the following bleeding disorders:

<table>
<thead>
<tr>
<th>Factor deficiencies</th>
<th>Disseminated intravascular coagulation</th>
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<tbody>
<tr>
<td>Hemophilia A/B</td>
<td>Congenital platelet defects</td>
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<tr>
<td>Von Willebrand’s disease</td>
<td>Drug-induced bleeding</td>
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17. Recognize that aspirin use may result in bleeding and describe the mechanism. Contrast this mechanism to that of bleeding induced by GP IIb/IIIa receptor antagonists and ADP receptor antagonists.
18. Utilize laboratory and clinical data to properly diagnose a bleeding disorder caused by a defect in primary hemostasis vs. a defect in a coagulation factor vs. a drug overdose.