September 12, 2017 AHD Objectives

The Bleeding Patient/The Hypercoagulable patient

1. Differentiate the history and clinical syndrome of a patient with a bleeding disorder involving primary hemostasis (thrombocytopenia and qualitative platelet defects) from secondary hemostasis (humoral clotting factor problems).
2. Draw a simple representation of the clotting cascade. Interpret the laboratory tests used to evaluate bleeding disorders including prothrombin time (PT), activated partial thromboplastin time (aPTT), thrombin clotting time (TCT) and understand what part of the clotting cascade each of these tests measure. Describe the indication for ordering mixing studies and know how to interpret the results.
3. Describe the clinical presentation and laboratory findings of hemophilia A and B (including coagulation factor levels), and von Willebrand's disease (including von Willebrand factor activity and antigen levels). Distinguish between hemophilia and von Willebrand's disease based on genetic inheiritance patterns.
4. List the eight **hereditary** risk factors for thrombophilia that are tested for in a hypercoagulable work up. List at least 8 more **acquired** risk factors for thrombophilia, and know which of the acquired risk factors is the most prevalent.
5. Define a provoked and an unprovoked venous thrombosis event.
6. List the characteristics of the patient in whom a hypercoagulable work up is indicated.

CML/Myeloproliferative Neoplasms:

1. Define myoproliferative neoplasms (MPNs) and list the four typical MPNs. Know which of these MPNs are BCR-ABL negative and which one is BCR-ABL positive.
2. Describe the clinical syndrome (including lab values) that should make the internist suspect chronic myelogenous leukemia. Describe the differential diagnosis and know how to make the diagnosis. Understand the mainstay of treatment and how the prognosis has changed due to tyrosine kinase inhibitor development.
3. Describe the clinical syndrome (including lab values) that should make the internist suspect polycythemia vera. Describe how to distinguish primary polycythemia from secondary polycythemia. Understand the basics of treatment and the risk of hypercoagulability.
4. Describe the clinical syndrome (including lab values) that should make the internist suspect essential thrombocytosis. Describe erythromelalgia. Understand the mainstay of treatment of ET.
5. Describe the clinical syndrome (including lab values) that should make the internist suspect myelofibrosis. Understand how to make the diagnosis.

Acute Leukemia:

1. Understand the incidence of AML and ALL in adult populations.
2. AML:
    A. List several risk factors for AML.
    B. Describe the clinical syndrome (including lab values) that should make an internist suspect AML, and specifically pro-myelocytic AML.
    C. List three clinical scenarios that require emergent diagnosis and management.
    D. Describe the prognosis for the favorable, intermediate, and unfavorable risk groups.
    E. Describe the induction treatment and consolidation treatment for AML.
    F. Describe the situation in which an allogenic bone marrow transplant should be considered after induction treatment.
3. ALL:
    A. List several risk factors for ALL.
    B. Describe the clinical syndrome (including lab values) that should make an internist suspect ALL.
    C. Understand the importance of testicular exam and LP in patients diagnosed with ALL.
    D. Describe some favorable vs. unfavorable prognostic factors.