

Unit 7: Hematology
Chapter 33 & 34
ONLINE CONTENT (2H)

Complete the worksheet and submit in the Unit 7: Hematology dropbox by March 17, 2025 at 0800. Please be sure to bring a copy to class on March 17, 2025.

Table 1	Iron Deficiency Anemia	Thalassemia	Cobalamin (Vitamin B₁₂) Deficiency	Folic Acid Deficiency
Etiology	Inadequate diet intake, malabsorption, blood loss, or hemolysis.	Inadequate production of normal Hgb, which decreases RBC production.	Absence of intrinsic factor. Pernicious anemia is a disease of insidious onset.	Poor diet, alcoholism, pregnancy, and certain medications.
Clinical Manifestations	Fatigue, pallor, weakness, SOB, glossitis, and cheilitis.	Fatigue, pallor, jaundice, splenomegaly, and hepatomegaly.	Weaknesses, paresthesia's of the feet and hands, and a sore, red, beefy, and shiny tongue.	Fatigue, pallor, glossitis, and megaloblastic anemia.
Diagnostic Studies	CBC, stool occult blood test, endoscopy, and colonoscopy.	CBC, peripheral blood smear, and hemoglobin.	CBC and low serum b12.	CBC, low serum folate, and normal B12 levels.
Drug Therapy	Oral iron supplements, and IV iron for severe cases.	Blood transfusion, and iron chelation therapy to prevent iron overload.	Vitamin B12 injections and high dose oral/sublingual B12 supplements.	Folic acid supplements.
Nursing Management	Encourage iron-rich foods, educate on iron supplement intake, and monitor for GI side effects.	Monitor for complications, genetics counseling, folic acid supplementation, and avoid excess iron intake.	Educate on lifelong B12 therapy, dietary sources, and monitor neurological symptoms.	Encourage folate rich foods, supplements during pregnancy, and education on medication interactions.

Table 2	Anemia of Chronic	Aplastic Anemia	Acute Anemia due	Chronic Anemia
---------	--------------------------	------------------------	-------------------------	-----------------------

	Disease		to Blood Loss	due to Blood Loss
Etiology	Usually develops after 1 to 2 months of disease activity.	Autoimmune activity by autoreactive T lymphocytes. The cytotoxic T cells target and destroy the patients' own hematopoietic stem cells.	Trauma, surgery, GI bleeding, and hemorrhage for childbirth.	Slow ongoing blood loss from GI ulcers, heavy menstrual bleeding, and chronic use of NSAIDs.
Clinical Manifestations	Fatigue, pallor, and mild SOB.	Fatigue, pallor, frequent infections, and easy bruising.	Rapid onset of fatigue, dizziness, tachycardia, hypotension, pale and cool skin, and possible shock.	Fatigue, pallor, SOB, tachycardia, and brittle nails.
Diagnostic Studies	Low hemoglobin, low serum iron, and low TIBC.	Hgb, WBC, platelets, and bone marrow biopsy.	Low hemoglobin, hematocrit, and RBC usually 2-3 days after incident.	Iron supplements, treatment of the underlying cause.
Drug Therapy	Treating the underlying conditions.	Immunosuppressive therapy, bone marrow transplant, and blood transfusions.	Blood transfusions, IV fluids, and iron supplements.	Iron supplements
Nursing Management	Monitor hemoglobin levels, encourage proper nutrition, and manage the symptoms of the underlying condition.	Prevent infections, monitor for bleeding, and manage fatigue.	Monitor vital signs, stop the bleeding, give blood products, and provide oxygen.	Encourage iron rich diet, educate on iron therapy, and monitor for worsening anemia.

Table 3	Acquired Hemolytic	Hemochromatosis	Polycythemia
---------	---------------------------	------------------------	---------------------

	Anemia		
Etiology	Autoimmune disorders, infections, certain medications, blood transfusion reactions, and toxins.	Genetic disorder causing excessive iron absorption, chronic blood transfusions, and liver disease.	Overproduction of RBCs due to a bone marrow disorder or a secondary cause.
Clinical Manifestations	Fatigue, pallor, jaundice, dark urine, SOB, tachycardia, and splenomegaly.	Fatigue, joint pain, skin bronzing, liver enlargement, and diabetes.	Headaches, dizziness, blurred vision, hypertension, pruritus, and a risk of blood clots.
Diagnostic Studies	CBC, elevated bilirubin, and increased LDH.	High serum ferritin, high transferrin saturation, and liver biopsy.	High hemoglobin and hematocrit, low erythropoietin, and bone marrow biopsy.
Drug Therapy	Corticosteroids, immunosuppressants, and blood transfusions.	Iron chelation therapy	Phlebotomy, hydroxyurea, and aspirin.
Nursing Management	Prevent infections, education on medication adherence, and assess for complications.	Educate on avoiding iron rich food and vitamin C, regular phlebotomy treatments, vital signs, and monitor for organ damage.	Monitor for thrombotic events, encourage hydration, monitor vital signs, avoid smoking, and educate on managing symptoms.

In order to receive full credit (2H class time) for this assignment, it must be completed in its entirety by the due date/time assigned. Any assignment not completed in its entirety by the due date and time will result in missed class time and must be completed by the end of the semester to pass the course.