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 B_{12}) Deficiency**	**Folic Acid Deficiency**
Etiology	Blood doesn't have enough healthy red blood cells to carry oxygen throughout body	Genetic disorder that affects the body's ability to produce hemoglobin	Lack of vitamin B12 in body leading to reduction of red blood cells	Lack of folate in the body that essential for cell growth and development
Clinical Manifestations	Hair loss, fatigue, lethargy, dizziness	Weakness, pale or yellowish skin, slow growth, ABD swelling	Shortness of breath, poor balance, numbness/tingling	Mouth sores and ulcers, diarrhea, muscle weakness, depression
Diagnostic Studies	CBC and iron studies	Genetic analysis and blood tests	CBC and serum vitamin B12 level test	Blood test to measure folate levels
Drug Therapy	Iron supplements	Blood transfusions	Vitamin B12 injections or oral supplements, dietary changes	Folic acid vitamins, dietary changes, treat underlying conditions
Nursing Management	Monitor hemoglobin and hematocrit levels, assess for GI bleed, educate on iron-rich foods and supplements	Nutritional assessment, assess for any bleeding, chelation therapy	Monitor hemoglobin and hematocrit levels, assess for symptoms such as numbness, tingling, weakness, and altered mental status, educate on diet change and medication adherence	Assess for underlying conditions, educate on avoiding excessive alcohol intake, educate on folate-rich foods like leafy greens, bean, and citrus fruits

Table 2	**Anemia of Chronic Disease**	**Aplastic Anemia**	**Acute Anemia due to Blood Loss**	**Chronic Anemia due to Blood Loss**

Etiology	Anemia caused by chronic inflammatory conditions	Deficiency in RBCs, WBCs, and platelets due to damage to the bone marrow stem cells	Rapid loss of blood resulting in decreased number of blood cells and hemoglobin, due to trauma or GI bleed	Body loses RBCs over a long period of time caused by chronic conditions
Clinical Manifestations	Shortness of breath, dizziness, tachycardia	Rash, bleeding, bruising, pallor, shortness of breath	Tachycardia, shortness of breath, Dizziness	Difficulty breathing, cold extremities, irregular or fast heart rate
Diagnostic Studies	CBC, C-Reactive Protein, or Erythrocyte Sedimentation Rate, physical exam	CBC, bone marrow tests, physical exam	CBC, iron studies, reticulocyte count, physical exam	CBC, peripheral blood smear, physical exam
Drug Therapy	Iron supplements, erythropoietin injections, transfusions, diet changes	Immunosuppressive therapy using antithymocyte globulin and cyclosporine, diet changes	Blood transfusion, IV fluids, Packed red blood cells infusion, diet changes	Blood transfusion, iron supplements, vitamin injections, diet changes
Nursing Management	Assess for underlying conditions, educate on nutrition and iron supplements, and medication adherence	Assess for any bleeding, assess patient's history, assess vital signs, monitor for signs of infection	Find the source of bleeding and immediately provide treatment to stop the bleed, monitor blood tests and implement blood transfusions	Assess for source of bleeding, monitor for neurological changes, monitor vital signs, monitor oxygenation status, assess nutritional deficiencies

Table 3	**Acquired Hemolytic Anemia**	**Hemochromatosis**	**Polycythemia**
	Red blood cells that are prematurely destroyed	Absorption of too much iron	Elevated number of red

Etiology	due to many different things	in the body	blood cells in the blood
Clinical Manifestations	Jaundice, dark urine, fatigue, shortness of breath, fatigue	Hepatitis, dysrhythmias, joint pain, gray colored skin	Blood clots, joint pain, fatigue, dizziness, headache, redness of face and hands
Diagnostic Studies	CBC, peripheral blood smear, reticulocyte count, bilirubin levels, physical exam	CBC, iron studies, genetic testing	CBC, blood tests that measure RBCs, hemoglobin and hematocrit levels
Drug Therapy	Corticosteroids, Rituximab, blood transfusions	Bloodletting (removing iron from the body), iron chelating medications, liver transplants, diet changes	Phlebotomy (removing blood from the body), blood thinners to reduce clots
Nursing Management	Assess for any signs of bleeding, monitor intake and output, assess for altered mental status, educate on diet and medications	Educate on the importance of avoiding iron supplements and limiting alcohol, assess for any signs of complications of this disorder (liver disease, diabetes, etc)	Educate on preventing blood clots and signs of a blood clot, promote hydration, educate on medication compliance and diet changes

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.