AMSN 2019

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Unit 7: Hematology- Red Blood Cell Disorders (Anemia)

Complete this worksheet and do the following:
-Place into your dropbox by March 18, 2019 at 0800.
-Bring a copy to class on March 18, 2019.

Page 1	Iron Deficiency Anemia	Thalassemia	Cobalamin Deficiency	Folic Acid Deficiency
Etiology	-Inadequate diet intake, malabsorption, blood loss, hemoloysis	-Inadequate production of normal Hgb, decreased drythrocyte, absent or reduce globulin protein	-Diet deficiency -Deficiency of gastric intrinsic factor	-Diet deficiency -Malabsorption (celiac, crohns, small bowel resection)
Clinical Manifestations	-early=no symptoms -Pallor, glossitis, cheilitis, headache, paresthesia and burning of the tounge	-can be asymptomatic -mild-moderate anemia -Physical and mental retardation -Pallor with anemia related symptoms -HEP C and heart is compromised	->40 years -Sore, red, beefy tounge -anorexia, N/V, and abd pain -Neurological symptoms	-dyspepsia -smooth, red, beefy tounge **biggest difference from cobalamin is no nuero symptoms
Diagnostic Studies	Labs: hgb/hct, MCV, reticulocytes,serm FE, Tibc, transferrin, ferratin, bilirubin -colonoscopy or endoscopy -bone marrow biopsy	-hgb/gct, MCV, retic, iron, tibc, transferrin, ferratin, bilirubin	Labs RBC-macrocytic Folate level Anti IF Glendo	Labs

Drug Therapy -include name, dosage, route, and nursing interventions	-Oral iron with vitamin C (enteric coated preferred) -150-200 mg 3-4x a day -take 1 hour before meals -may cause GI upset -check for allergies		-B12 -Intranasal cyancobalamin 1000 mcg/day	-replacement therapy 1mg/day -Chronic 5mg/day
Nursing Management -include patient education	-Check for anemia during pregnancy, low socioeconomic, blood loss -edu: diet, food with iron, compliance with labs	-Blood transfusion or exchange transfusion with chelating -Oral deferasiox or deferiprone -Folic acid supplement	-educate on good nutrition	-edu on food high in folic acid and supplemental

Page 2	Anemia of Chronic Disease	Aplastic Anemia	Acute Anemia due to blood loss	Chronic Anemia due to blood loss
Etiology	-Chronic inflammation, autoimmune, HF -Underproduction of RBC	-Periphreal blood pancytopenia (decrease in all blood cells) -Hypocellular	-Trauma -Sudden hemorrhage	Depletion of iron stores

		marrow		
Clinical Manifestations	-Depends on underlying disorder	-fatigue, dyspnea, heart and cerebral issues, bleeding(petichie, ecchymosis, epistaxis	-hypovolemic shock, vasovagal syncope, tachy, hypoTN, postural hypoTN and tachycardic, Air hunger, rapid thread pulse, cold, clamy	bleeding ulcer, hemorrhoids, menstrual and postmenopausal
Diagnostic Studies	-Labs	-labs -Bone marrow biopsy	-Labs	labs
Drug Therapy -include name, dosage, route, and nursing interventions	-Treat underlying disease -Erythropoietin therapy	HSCT and immunosuppressants with antitithymocyte globulins, cyclosporine, high levels of cyclophophamide	-replace blood loss, iv fluids, dextran, hetastrach, albumin, lytes, transfuse iron	Supplemental iron, blood replacement
Nursing Management -include patient education	Edu on s/s of anemia	Medication compliance and s/s	Admin blood	Identifying the source and stopping the bleeding

Page 3	Acquired Hemolytic Anemia	Hemochromatosis	Polycythemia
Etiology	Hemolysis of RBC from extrinsic factors: physical destruction, antibody reactions and infectious agents/toxins	Iron overload disorder can be caused by liver disease and chronic blood transfusions	-Production of increased RBC -increase blood viscosity
Clinical Manifestations	Lysis of RBC	-Early: fatigue, arthralgia, impotence, abd pain, weight loss Later: liver enlargement, cirrhosis, iron deposits in other organs, DM, skin pigment chane, cardiac change, arthritis and testicular atrophy	-Hypertension, hypervolemia, hyperviscosity, headache, vertigo, dizziness, tinnitus, visual disturbances, pruritus, angina, HF, intermittent claudication, thrombophlebitis, hemorrhagic phenomen can develop myelofibrosis and leukemia
Diagnostic Studies	Labs	-DNA testing , serum iron, total iron binding, transferrin saturation	Hgb,rbc,epo level,wbc,plt, alk phos, uric acid, cobalamin level, histamine, bone marrow
Drug Therapy -include name, dosage, route, and nursing interventions	Hydration and lytes therapy admin of corticosteroids and blood products, folate replacement, rituximab, eculizumab	-remove 500 mL of blood each week -iron chelating -Deferoxamine -Deferasirox and deferiprone	-300-500 mL blood removed -Hydration therapy -Iron supplement -hydroxyurea, busulfan, chlorambucil -Ruxolitinib, aspirin, anagrelide, allopurinol
		-Edu on early	-assess nutrition

Nursing Management -include patient education	Edu on supportive care until cause is removed	treatment	status, activites and meds passive leg exercises and ambulate, phlebotomy 2-3 months

List 3 effects that aging has on the Hematologic System:

1.decline in bone marrow cellularity

2. anemia

3.decline in immunity