Overview

Students will be assigned to complete the following case studies as listed below to connect theory to practice. Students will be assigned specific questions and answers are to be placed on the discussion board. Please see the discussion board to find names associated with the case studies. Students not assigned to case studies will post a "memory help" to the discussion board AND will post a review on at least two case study answers.

Sensory Case Studies

Iron Deficiency Anemia Case Study

G.F., 24yo female, has irregular painful periods lasting 7-10 days. She presents to the clinic for possible UTI and complains of fatigue and weight gain of 10 pounds over the past year. G.F. has not had any prior hospitalizations or surgeries. She has been pregnant once and experienced a miscarriage 3 months ago. G.F. is in graduate school and eats fast food several times a week. She tries to eat vegetarian choices when possible. Diagnostics obtained = CBC, urine culture, and urinalysis. CBC reveals WBC 13,000, HGB 11, HCT 33%, MCV 75, RDW 18%, PLT 285,000. Urine culture and urinalysis results are consistent with UTI. G.F. is prescribed an antibiotic for her UTI and has additional labs ordered (Ferritin, Transferrin, and TIBC) to follow up on the abnormal findings from the CBC. She was subsequently phoned to come in to discuss the findings of iron deficiency anemia (IDA) and pick up a prescription for Ferrous Sulfate 325mg PO TID and ascorbic acid 100mg PO daily.

1. What findings in the labs are consistent with IDA? What type of anemia is IDA considered? Why? What would the nurse expect the results of the ferritin, transferrin, and TIBC to be? Why?
2. What must the nurse teach G.A. about the medications targeting IDA? When can G.A. expect to stop taking ferrous sulfate?
3. Identify G.A.'s risk factors for IDA. Given her history, what are some signs/symptoms likely to be evident when performing a physical exam?
4. List 4 nursing diagnosis to be considered for planning care.
5. What type of diet should G.A. be encouraged to adopt? Provide a 3-day meal plan.

Chronic Anemia Secondary to CKD

C.R., 43yo female, with CKD now presenting in Stage 4 is admitted for fluid volume overload. She was admitted in the morning and is being treated via medications with the possibility of receiving dialysis. Epoetin alpha (initial dose 100Units/Kg SQ three times per week) and IV iron dextran (200mg IV x1 dose) have now been prescribed for the first time in C.R.'s management of care. C.R. reports her level of fatigue has increased over the past few months and states, "I'm always a little tired but now my fatigue has really become an issue in my life. I feel like I can't do what I want to do anymore. How will new meds help me? I'm worried about starting these medications since I've never had them before." Labs reveal the following:

CMP		**CBC**	
BUN	32	WBC	8600
Cr	2.8	Hgb	8.8
GFR	18	Hct	25%
K^+	3.4	RBC	4.1
Na	136	MCV	84
Ca	9.3	MCHC	32
PO_4	2.8	RDW	14%
Mg	1.5	PLT	160,000
Total protein	5.5		
Albumin	3.3		
Glucose	188		

1. What does the nurse need to teach CR about the new medications of epoetin alpha and IV dextran?
2. What labs support the finding of chronic anemia secondary to CKD?

3. How can the nurse address fatigue with CR? What types of interventions might help CR?

Hemorrhagic Anemia

W.P., 45yo male, admitted to the hospital for elective bariatric surgery with EBL and is now 3 days post-op. Admission labs reveals H&H of 14.3 & 41 respectively. Admission VS = BP 136/82, HR 82, RR18, T97.6. Today's morning post-op labs reveal H&H of 12.1 & 37. W.P. reports feelings of exhaustion after ambulating to the hospital room door and back to bed. His color is pale and he reports dizziness upon standing up. VS after morning care in hospital room = BP120/70, HR110, RR22, T99.9. Pain 4/10.

1. What type of anemia is W.P. likely experiencing? Would the nurse expect to find the MCV low, within normal range, or high? Why?
2. What signs and symptoms would warrant notification to the provider of further bleeding?
3. What is an expected finding of the RBC level on day 1 post op for a patient experiencing acute blood loss? What about day 3 post-surgery? Would W.P.'s reticulocyte count be expected to rise, stay the same, or lower? Why?

Folate Deficiency Anemia

M.R., 22yo male, hx of Crohn's disease is being discharged from the hospital for abdominal pain secondary to ulcerative colitis. M.R. reports, "Until this episode with ulcerative colitis, I've been able to handle Crohn's ok with small meals throughout the day. I had switched to mostly plant based meals since meat seems to be a problem with me." M.R.'s labs are consistent with folic acid deficiency and he has been prescribed oral folic acid 400mcg per day.

1. What labs would the nurse expect to find and evaluate to find substantiate a B9 deficiency? Why is folic acid considered to be a macrocytic megaloblastic anemia?
2. What type of diet should M.R. be instructed to eat? Craft a meal plan for 3 days.
3. What are M.R.'s risk factors for B9 deficiency? When should he call his healthcare provider after starting oral folic acid supplementation?

B12 Deficiency Anemia

S.F., 62yo female, presents to the clinic for her annual physical. S.F. is an attorney with a busy law firm where she works very long hours. Med hx: HTN for past 5 years. No past surgeries. Current meds: 10mg lisinopril PO daily. BMI 32. S.F. states, "I notice I have a hard time staying focused when drafting legal documents. I've slowed down over the past year because I seem to feel tired all the time." When asked about her diet, S.F. states she tries to avoid all meats and animal products as a way of eating healthier. She tends to have 2 plant based meals each day with small snacks throughout the day. Her labs reveal the following:

- CBC: WBC 6; HGB 10.5, HCT 29%, MCV 120, RDW 17%, PLT 250,000
- CMP: all WNL
- A1C: 5.8
- Thyroid Panel: all WNL

1. What are the findings in the case study that would support a B12 deficiency finding? What other signs/symptoms might also support a B12 deficiency finding?
2. Outline a diet for 3 days (breakfast/lunch/dinner) that would be helpful for S.F.
3. S.F. is prescribed oral cyanocobalamin 1500mcg/day. Please outline what the nurse must teach S.F. to take the medication safely.

Pernicious Anemia Case Study

T.B., 72yo male, presented to the clinic with his daughter for evaluation of tingling in his hands and feet and sore smooth tongue. T.B. has been healthy throughout his life with no chronic illnesses. He does not take any medications and is not allergic to any medications. However, he became a widower a year ago and his daughter who lives nearby visits him several times a week. His daughter reports her father has become increasingly tired and when she visits with him he has periods of confusion and

becomes agitated. Labs revealed a severe state of B12 deficiency and T.B. was diagnosed with pernicious anemia. He has been prescribed cyanocobalamin 100 mcg IM once daily for 6-7 days, then every other day for 7 doses, then every 3-4 days for 2-3 weeks, then monthly.

1. What does the nurse need to teach T.B. and his daughter about cyanocobalamin? What equipment will be needed and how will the medication be administered?
2. What are T.B.'s risk factors for pernicious anemia? What are the findings that are consistent with pernicious anemia?
3. T.B.'s daughter asks if he can take oral supplementation and change his diet instead of having to take injections as she is uneasy about learning how to administer the medication. How should the nurse address her concerns?