Academic Half Day: Anemia

Case #1: A 26 y/o African American female presents to clinic for a new patient visit, and reports she has been feeling fatigued for the past several months. She informs you that she had gestational diabetes that resolved after delivery two years ago. However, she was told around the time of her delivery that her blood counts were low, but never followed up about this.

1. **What additional elements of her history will you ask the patient?**

2. **What are characteristic symptoms of anemia?**

3. **What pertinent findings are you looking for on her physical exam?**

You tell your team that you are relieved to hear that your patient is not having any associated symptoms, denies any family history of bleeding or sickle cell disease, and her physical exam is unremarkable. You decide to order a CBC.

WBC 6.4 \ Hgb 9.4 \ Hct 28 \ PLT 456

MCV 75 \ RBC 3.1 \ MCH 25.4 \ MCHC 29 \ RDW 17

4. **How do you describe this anemia? What is your differential diagnosis? What workup do you pursue?**

Table 4. Laboratory Tests in the Differential Diagnosis of Microcytosis

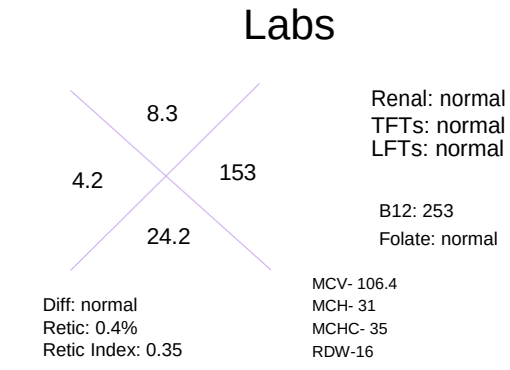
	Suggested diagnosis			
Test	*Iron deficiency anemia*	*Thalassemia*	*Anemia of chronic disease*	*Sideroblastic anemia*
Serum ferritin level				
Red blood cell distribution width				
Serum iron level				
Total iron-binding capacity				
Transferrin saturation				

Your patient's labs: **Ferritin 14 \ TIBC 455 \ Serum Iron 27 \ %Fe 5**

5. **Now that you've confirmed the diagnosis, what are the next steps in management?**

6. When is it appropriate to refer a patient for iron infusion therapy?

Case 2: A 67 y/o Caucasian male schedules an urgent visit because has been feeling increasingly lethargic and has been told he looks pale. He has a history of HTN, T2DM, and GERD. You order basic lab work: CBC, renal, TFTs, LFTs.



1. **What are some of the causes of macrocytic anemia?**

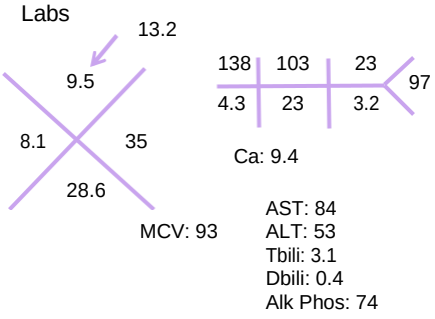
2. **What else do you want to know about his history?**

3. **What other labs do you want?**

3. What are some common causes of B12 deficiency?

4. How should you treat a patient with B12 deficiency?

Case #3: 44 y/o Caucasian female with no significant PMHx is brought to the ER by her husband for 2 days of fevers to 101F, lethargy, and confusion. Vitals T 101F BP 110/75, HR 96, RR 24, SpO2 94% on RA. She can't give you much of a history. You get basic labs.



1. What is alarming about the presentation and labs?

2. **What additional labs do you want now?**

3. **What is your differential for hemolytic anemia?**

4. **What is the diagnosis and how do you manage this patient?**

5. **Do you give platelet transfusions for that low PLT 35?**

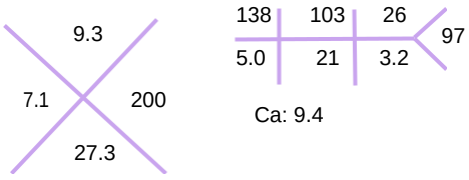
6. How is TTP different from HUS?

	ITP	TTP	HUS	HIT	DIC
Thrombocytopenia:					
Increased PT/INR:					
MAHA:					
Fibrin/Fibrinogen:					
Ok to give Platelets:					
Clots?					
Bleeding?					
Treatment					

Case #4: 82 y/o Caucasian woman with hypertension, hyperlipidemia, lumbar spinal stenosis, hypothyroidism, CKD (b/l Cre 3) who presents for follow up. She has had recent problems with hyperkalemia, necessitating discontinuation of losartan that she was taking for HTN. She complains of not feeling good, mild exertional dyspnea, and low energy.

Meds: Amlodipine 10 mg daily, Levothyroxine 50 mcg daily, Pravastatin 20 mg daily

Labs



MCV: 80

1. **What additional tests should be ordered to evaluate the anemia?**

2. **What is the most likely cause of her anemia?**

3. **What treatment can be considered and what are the risks?**