Chapter 80:

LEARNING OBJECTIVES

On completion of this chapter, the reader will be able to:

1. Classify an anemia using the following data: reticulocyte count, peripheral blood smear, hemoglobin, hematocrit, red blood cell (RBC) indices, serum iron, total iron-binding capacity, ferritin, folate, vitamin B₁₂, homocysteine, and methylmalonic acid.

2. Discuss the life cycle of RBCs (development, maturation process, and normal destruction).

3. Compare and contrast the presenting signs and symptoms of anemia in a patient who develops anemia acutely versus a patient who develops anemia gradually.

4. Discuss the dietary sources of iron, including the daily requirements for children, men, and women.

5. Formulate an oral iron-replacement regimen for a patient, including product selection, patient counseling, length of therapy, and appropriate monitoring parameters.

6. Determine when it is appropriate to use oral versus parenteral iron replacement therapy.

7. Compare and contrast the four different parenteral iron formulations.

8. Describe the causes, clinical signs and symptoms, and diagnostic workup of vitamin B₁₂ deficiency.

9. Recommend a treatment regimen for vitamin B₁₂ deficiency, including patient counseling, route, length of therapy, and appropriate monitoring parameters.

10. Describe the causes and clinical signs and symptoms for folic acid deficiency anemia.

11. Recommend a treatment regimen for a patient with folic acid deficiency, including dose, route, dietary sources, length of therapy, and appropriate monitoring parameters.

12. List common causes of anemia of chronic disease.

13. Discuss treatment options for anemia of chronic disease.

14. Describe common causes of anemia of critical illness.

15. Discuss the treatment options for anemia of critical illness.

16. Discuss the various reasons for anemia in the geriatric and pediatric populations.

17. Determine drug-induced causes of anemia based on patient-specific information and the prescribed regimen.