Chapter Review

Word Building

Construct medical terms from the following meanings. (Some are built from word parts, some are not.) The first question has been completed as an example.

1. reduced ability of blood to deliver oxygen
2. presence of red blood cells of unequal size
3. any abnormal condition of the blood
4. a serious protozoan infection of red blood cells
5. abnormal reduction of red blood cells
6. inherited defect in blood coagulation
7. cancer originating in red bone marrow, producing abnormal white blood cells
8. abnormally large red blood cells
9. a condition of staphylococci (bacteria) in the blood
10. disease caused by immune reaction against own tissues
11. abnormal increase in number of red blood cells
12. red blood cells that are tear-shaped
13. presence of bacteria and toxins in the blood
14. a drug that reduces blood clotting
15. transfusion of blood donated by another person
16. measures percentage of red blood cells in a sample
17. stoppage of bleeding
18. calculation of the number of platelets in blood
19. cancer of lymphatic tissue
20. inflammation of the lymph nodes
21. bacterial disease that causes a membrane in the throat to form

anemia
__________cytosis

dys__________
___________ia

erythro__________
___________philia
___________emia

macro__________
staphylococc__________disease
___________emia
___________cytosis

septic__________
anti__________
___________logous transfusion

hemato__________
___________stasis
___________count
___________disease
___________itis

___________ia
Medical Report Exercises

Millie Nyugen

Read the following medical report, then answer the questions that follow.

PEARSON GENERAL HOSPITAL

5500 University Avenue, Phone: (211) 594-4000
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Medical Consultation: Hematology
Date: 10/02/2011
Patient: Millie Nyugen

Patient Complaint: Mild fever for two weeks with general body aches; tenderness of the armpit and groin regions to pressure that was first noticed more than one month previous.

History: 55-year-old female of Asian-American descent with no prior hospitalization or serious complaints.

Family History: Father deceased at 62 years with primary hepatic cancer. Mother, 77 years, with complete hysterectomy following diagnosis of stage 1 cervical cancer; no reported conditions otherwise.

Allergies: Dietary restrictions to sesame seeds and milk products.

Physical Examination: Vital signs include mild fever of 99.9°F, blood pressure elevated at 130/90, pulse 75/min.
Possible swollen lymph nodes in cervical, axillary, and inguinal regions. Differential count: neutrophils, monocytes, lymphocytes elevated 25%. Blood culture positive for Staphylococcus.

Diagnosis: Staphylococcemia

Treatment: Antibiotic treatment with two IV antibiotics with daily reevaluation until cleared. Follow-up in two weeks after discharge.

Sylvia S. Hernandez, M.D.

Photo Source: Monkey Business Images/Shutterstock

Comprehension Questions

1. What complaints support the diagnosis?

2. Why do you think antibiotics might fail as a treatment?

3. What does the term staphylococcemia mean?
Case Study Questions
The following Case Study provides further discussion regarding the patient in the medical report. Fill in the blanks with the correct terms. Choose your answers from the list of terms that precedes the case study. (Note that some terms may be used more than once.)

antibiotic     Hodgkin's disease     lymphadenitis     septicemia
blood culture  immunodeficiency   immunotherapy     splenomegaly
 differential count  infection     lymphoma     staphylococcemia

A 55-year-old female, Millie Nyugen, was admitted to the infectious disease wing of the clinic after having been referred by her personal physician, due to a prolonged fever and mild inflammation of the lymph nodes, called (a) ________________, in the neck, armpit, and groin regions. The doctor's initial diagnosis was an unspecified disease of the lymph nodes, or lymphadenopathy, and she was concerned about a possible tumor originating in the lymph nodes, or (b) ________________, which might include cancer of the nodes, or (c) ________________. Upon more thorough examinations, no evidence of a tumor was found. However, an abnormal enlargement of the spleen, or (d) ________________, was observed. Blood tests including a(n) (e) ________________ were ordered to look for multiplication of pathogens, or a(n) (f) ________________. The tests were positive for bacteria, indicating the patient suffered from (g) ________________, or bacterial infection of the blood. Further tests identified the common bacterium *Staphylococcus* as the causative pathogen, providing the diagnosis of (h) ________________. The patient was administered (i) ________________ therapy. However, after two weeks, the symptoms failed to lessen. The patient had developed a deficient immune response, or (j) ________________. To combat this, (k) ________________ was begun immediately that included antibody treatments in combination with antibiotic therapy. A complete recovery resulted after three months of treatment.
For a greater challenge, read the medical report provided and answer the critical thinking questions that follow.

PEARSON GENERAL HOSPITAL
5500 University Avenue, Phone: (211) 594-4000
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Medical Consultation: Infectious Disease
Date: 11/08/2011
Patient: Shane Alexander

Patient Complaint: Lethargy, frequent acute infections

History: 17-year-old African-American male with no prior history of disease; childhood vaccinations complete.

Family History: Mother and father negative for immunological and hematological disease.

Allergies: None

Physical Examination: Hct and HGB with low RBCs and correspondingly low hemoglobin levels; dietary supplements with folic acid did not resolve. Microscopic evaluation of red blood cells revealed poikilocytosis and anisocytosis. Bone marrow bx positive for myelodysplastic cells.

Diagnosis: Aplastic anemia

Treatment: Stabilize with whole blood homologous transfusion. If patient fails to resolve in two weeks, prepare for bone marrow transplant.

Photo Source: Tracy Whiteside/Shutterstock

Comprehension Questions

1. Why were dietary supplements administered to the patient?

2. What is aplastic anemia?

3. How would you describe the symptoms of poikilocytosis and anisocytosis?
Case Study Questions
The following case study provides further discussion regarding the patient in the medical report. Recall the terms from this chapter to fill in the blanks with the correct terms.

A 17-year-old male named Shane Alexander was seen by his personal physician after complaining of low energy and susceptibility to infections. Prior to seeing the patient, the physician suspected that a nonspecific blood disorder, or (l) ________________, was the cause of the symptoms and ordered tests to measure the levels of blood components, known as a (m) ________________, including a test for the percentage of red blood cells, called a (n) ________________, and a test for the levels of hemoglobin in the blood, called a (o) ________________.

The tests showed low hemoglobin and low numbers of red blood cells, but low numbers of red blood cells, suggesting a general condition of (p) ________________. Dietary supplements of iron and folic acid were administered. About two weeks later, the dietary supplements failed to correct the symptoms, thereby ruling out (q) ________________ ________________ anemia. A microscopic evaluation of cells was then ordered. This test revealed that red blood cells were of unequal size, a condition known as (r) ________________, and were irregularly shaped, a condition called (s) ________________. Samples from red bone marrow were then examined, which showed that abnormal stem cells were producing the defective red blood cells, a condition known as (t) ________________ anemia. Because this condition was identified early, before the cells became cancerous (which would have resulted in the cancer known as (u) ________________), treatment by irradiation was successful in restoring the patient’s health.