



Immunology

Title : Quizes

Lec no : 1 + 2

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وَقُلْ رَبِّ زِدْنِي عِلْمًا

1. Which one of the following is an attribute of the innate, rather than the adaptive (acquired), arm of our host defenses?

- (A) Is highly specific in its response to individual bacterial species
- (B) Responds to viruses and fungi, but not bacteria
- (C) Exhibits memory following exposure to bacteria
- (D) Is part of our host defense against bacteria but not against fungi
- (E) Is as effective the first time it is exposed to bacteria as it is subsequent times

2. Your patient says that she must travel on business 3 days from now to a country where hepatitis A is endemic. She just read in the news-paper that there are two types of protection against this disease: one is a vaccine that contains killed hepatitis A virus, and the other is a serum globulin preparation that contains antibodies to the virus.

She asks which you would recommend and for what reason?

- (A) The vaccine containing killed hepatitis A virus is best because it induces the most antibody.
- (B) The vaccine containing killed hepatitis A virus is best because it provides the most long-lived immunity.
- (C) The serum globulin preparation containing antibodies against the virus is best because it provides immunity in the shortest time.
- (D) The serum globulin preparation containing antibodies against the virus is best because it provides the most long-lived immunity.

3. Pathogen-associated molecular patterns (PAMPs) :

- A. allow B and T lymphocytes to recognize bacteria and destroy them.
- B. are cysteine-rich peptides that form channels in bacterial membranes.
- C. are recognized by pattern recognition receptors of the innate immune system.
- D. closely resemble host cell surface proteins and sugars.
- E. induce secretion of interferons by vi rally infected host cells.

4. A certain population of lymphocytes inhibits activity of autoreactive lymphocytes. Such inhibitory cells express both:

- A. CD4 and CD25.
- B. CD1 9 and CD45.
- C. CD28 and CD80.
- D. IgA and IgD.
- E. IgG and IgM

5. An 18-year-old member of a college soccer team is seen by a physician because of chest tightness and dyspnea on exertion. A 15-cm mediastinal mass is detected radiographically. Eighty percent of the white blood cells in the peripheral blood are small, abnormal lymphocytes with lobulated nuclei and scant cytoplasm.

Immunophenotyping of the abnormal cells shows them to be CD4+ and CD8+. Where would such cells normally be found in the body?

- (A) Bone marrow
- (B) Peripheral blood
- (C) Thymic cortex
- (D) Thymic medulla
- (E) Splenic periarteriolar lymphoid sheaths

6. Human infections with *Mycobacterium leprae* express a spectrum of clinical presentations depending on the extent and expression of their immune response to the intracellular organism. On one end of the spectrum, patients with tuberculoid leprosy produce an effective cell-mediated immune response, which is successful at killing the intracellular organisms and, unfortunately, produces tissue damage. Patients with tuberculoid leprosy have granulomas that have elevated amounts of IL-2, IFN- γ , and TNF- β . The immune cell

responsible for this pattern of cytokine production is the :

- (A) Cytotoxic T lymphocyte
- (B) Epithelioid cell
- (C) Macrophage
- (D) Th1 cell
- (E) Th2 cell

7. Certain components of our immune system are characterized by two attributes: being able (1) to respond specifically to microbes and (2) to exhibit memory of having responded to a particular microbe previously. Which one of the following has BOTH specificity and memory?

- (A) B cells
- (B) Natural killer cells
- (C) Dendritic cells
- (D) Macrophages
- (E) Neutrophils

8. Which one of the following is the most accurate statement?

- (A) Loss of the epithelial barrier predisposes to fungal infections but not bacterial or viral infections.
- (B) The main function of mast cells and eosinophils is to engulf microbes and debris.
- (C) Eosinophils and natural killer cells are both innate cells of the myeloid lineage.
- (D) Dendritic cells are the primary cell responsible for initiating an adaptive immune response

9. Which one of the following is NOT a primary function of phagocytes?

- (A) Engulfing and killing invading microbes
- (B) Expression of proinflammatory cytokines and chemokines
- (C) Attacking cells with perforins and granzymes
- (D) Production of free oxidative radicals
- (E) Presentation of antigen peptides in complex with MHC to T cells

10. A 10-year-old male patient is diagnosed with an acute bacterial infection. His blood leukocyte count was 38,000 cells per LL (reference range: 4,500 to 12,500 per LL). The predominant cell type found in increased numbers in this patient's blood is

- A. eosinophils.
- B. neutrophils.
- C. monocytes.
- D. B cells.
- E. dendritic cells

11. Antibodies directed against which of the following proteins are useful in identifying T helper cells in samples of peripheral blood?

- A. CCL21
- B. CD4
- C. CD56
- D. CXCR4
- E. LFA-1

12. Natural killer cells are members of which of the following families of leukocytes?

- A. Basophils
- B. Eosinophils
- C. Lymphocytes
- D. Monocytes
- E. Neutrophils

13. A 16-year-old boy has acute appendicitis (infection of the appendix). Which of the following blood cells is most likely to increase in number as a result of his condition?

- A. Basophils
- B. Eosinophils
- C. Lymphocytes
- D. Monocytes
- E. Neutrophils

14. Which of the following cells are important effector cells in allergic reactions?

- A. Basophils
- B. Dendritic cells
- C. Lymphocytes
- D. Monocytes
- E. Neutrophils

15. Red blood cells are derived from :

- A. granulocytic lineage cells.
- B. lymphocytic lineage cells.
- C. monocytic lineage cells.
- D. myeloid lineage cells.
- E. thrombocytic lineage cells.

16. A subset of which of the following of these undergoes further differentiation within the thymus?

- A. Basophils
- B. Eosinophils
- C. Lymphocytes
- D. Monocytes
- E. Neutrophils

17. The thymus is the site of initial differentiation for

- A. B cells.
- B. erythrocytes.
- C. hematopoietic stem cells.
- D. NK cells.
- E. T cells

18. Lymph nodes have two main regions: the

- A. cortex and medulla.
- B. lymph and cortex.
- C. reticulum and cortex.
- D. lymph and medulla.
- E. reticulum and medulla

19. Which of the following is a primary lymphoid organ?

- A. Bone marrow
- B. Lymph node
- C. Peyer's patch
- D. Spleen
- E. Tonsil

20. The white pulp of the spleen is enriched in
- A. erythrocytes carrying hemoglobin.
 - B. CD4+CD8+ T cells binding to MHC.
 - C. natural killer cells recognizing targets.
 - D. plasma cells secreting immunoglobulin.
 - E. precursor cells developing into mature B cells

Q1: E

Q13: E

Q2: C

Q14: A

Q3: C

Q15: D

Q4: A

Q16: C

Q5: C

Q17: E

Q6: D

Q18: A

Q7: A

Q19: A

Q8: D

Q20: D

Q9: C

Q10: B

Q11: B

Q12: C



GOOD LUCK
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