VOLGOGRAD STATE
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Department of Pathological Anatomy

Immunopathological processes.

Questions

1. Macrophages secrete substances
a) IL-1
b) TNF
c) plasminogen activator
d) kappa chains of immunoglobulins
e) derivatives of arachidonic acid

2. Characteristics of cd4 + lymphocytes
a) secrete IgE
b) secrete IL-2
c) have cytotoxicity
d) perform suppressive functions

3. The reaction of hypersensitivity associated with the formation of IgE, refers to
a) type I (anaphylactic)
b) type II (cytotoxic)
c) type III (immunocomplex)
d) IV type (delayed type hypersensitivity)

4. The mechanism of development of autoimmune hemolytic anemia
a) immunocomplex
b) cell-associated cytotoxicity
c) antibody-associated cytotoxicity
d) immediate hypersensitivity
e) delayed-type hypersensitivity

5. Select the mechanisms underlying allergic reactions:
a) anaphylaxis
b) cytotoxic reactions
c) the reaction of immune complexes
d) blast transformation reaction
e) activation of T-killers
f) activation of T-suppressors

6. Immunopathological processes include:
a) disorders of immunogenesis
b) allergic reactions
c) reactions during transplantation
d) infectious immunity
e) autoimmune reactions
f) immunodeficiencies

7. The accidental transformation of the thymus is characterized by:
a) loss of lymphocytes
b) an increase in lymphocytes
c) collapse of the stroma
d) overgrowth of the stroma
e) fatty tissue degeneration

f) fatty tissue atrophy

8. Immunocompetent cells include:
a) lymphocytes
b) macrophages
c) mast cells
d) plasma cells
e) neutrophils
f) eosinophils

9. Allergens emit:
a) household
b) production
c) idiopathic
d) infectious
e) haptens
f) endogenous

10. Allergies of immediate type include:
a) Quincke's edema
b) bronchial asthma
c) allergic rhinitis
d) tuberculin reaction
e) atopic dermatitis
f) graft rejection

11. The most typical penetration of the allergen:
a) through the skin
b) respiratory
c) with food
d) with water
e) during sexual intercourse
f) parenterally

12. Stages of an allergic reaction:
a) sensitization
b) immunological
c) pathochemical
d) pathomorphological
e) pathophysiological
f) restorative

13. Examples of hapten allergy:
a) hay fever
b) reaction to penicillin
c) reaction to tuberculin
d) reaction to sulfonamides
e) transfusion of incompatible blood
f) photosensitivity

14. Mediators of reagin allergy:
a) histamine

b) bradykinin
c) adrenaline
d) serotonin
e) heparin
f) leukotrienes

15. Mediators of cytotoxic allergy:
a) lysozyme
b) interferon
c) kallikrein
d) complement
e) prostaglandins
f) superoxide anion radical

16. Mediators of immune complex type allergy:
a) leukotrienes
b) interleukins
c) complement
d) histamine
e) superoxide anion radical
f) interferon

17. Mediators of delayed allergy:
a) prostaglandins
b) leukotrienes
c) interleukins
d) histamine
e) superoxide anion radical
f) heparin

18. Delayed allergies include:
a) anaphylactic shock
b) serum sickness
c) multiple sclerosis
d) urticaria
e) systemic lupus erythematosus
f) HIV infection

19. A reaction like urticaria in response to exposure to sunlight is more correctly called:
a) incomplete allergy
b) photoallergy
c) pseudo-allergy
d) photosensitization
e) idiosyncrasy
f) allergoid reaction

20. On the surface of the mucous membranes, immunoglobulins of the class predominate.
a) A
b) D
c) E
d) G
e) M

Situational tasks

Problem No. 1 Sasha S., 6 years old, fell ill with diphtheria. Of the three children in contact with him in the apartment, two fell ill after 10 days. The third child did not fall ill; it is known from the anamnesis that he had already suffered diphtheria at the age of 3 years.

Questions: 1. Why didn't the child get sick? 2.What is immunity? 3. What types of immunity exist and which one does the child have?

Problem number 2 Patient I., 48 years old, was admitted to a surgical clinic about the carbuncle of the thigh. In the upper part of the right thigh on the inner surface there is a sharply painful dense infiltration of crimson-red color with a focus of necrosis in the center. The tissues around the infiltrate are swollen and tense. The lymph nodes in the right groin area are sharply enlarged and painful. Body temperature 38.5.

Questions: 1. How to explain the increase in lymph nodes? 2. What are "barriers" and what is their role in the mechanisms of immunity? 3. What are the main mechanisms of immunity?

Problem No. 3 Patient S., 32 years old, was admitted to the emergency room of the hospital in a serious condition: consciousness is lost, skin and mucous membranes are cyanotic, breathing is shallow. After several convulsive movements, the patient died with symptoms of asphyxia. It turned out that the patient suffered from hypersensitivity to aspirin, which caused her attacks of bronchial asthma. The doctor, not knowing about it, prescribed her powders containing this drug. After 10-15 minutes. after taking this powder, the patient felt unwell. Death came after 1 hour.

Questions: 1. What allergic reaction did the patient develop? 2. How is this reaction characterized?

Problem No. 4 Olya S., 9 years old, complains of general malaise, weakness, loss of appetite. In the evenings, the body temperature rises to 37.5. Physical examination did not reveal any changes in the internal organs. The child underwent a Pirquet reaction, which turned out to be sharply positive: after 24 hours, a papule (nodule) 15 mm in diameter with a zone of hyperemia was found at the site of tuberculin application. From the anamnesis it is known that 3 months ago Pirquet's reaction was negative.

Questions: 1. What is the mechanism for the development of a positive Pirquet reaction? 2. What is the difference between GZT and GNT?

Problem No. 5 Patient V., 50 years old, was treated with chloramphenicol for chronic bronchitis. The treatment proved to be effective; he was prescribed a maintenance dose of chloramphenicol, which he took for 6 months. By the end of this period, he developed severe anemia. The examination revealed the presence of antibodies in the patient's blood in relation to erythrocytes.

Questions: 1. What is the mechanism of anemia development in a patient? 2. What are autoaggressive diseases? 3. What diseases can develop as autoaggressive ones?

List of recommended literature:

Basic literature:

1. "Basic pathology" Vinay Kumar, Ramzi S. Cotran, Stanley L. Robbins, 1997.

Additional literature:

1. “Pathology. Quick Review and MCQs” Harsh Mohan, 2004.
2. “Textbook of Pathology ” Harsh Mohan, 2002.
3. “General and Systemic Pathology” Joseph Hunter, 2002.
4. “General and Systematic Pathology ” Ed. J.C.E. Underwood – Edinburgh: Churchill Livingstone, 1996 (2th).
5. “Histology for Pathologist” Ed. S.S.Sternberg – Philadelphia: Lippincott Raven Publ, 1997 (2th).
6. “Histopathology. A Color Atlas and Textbook” Damjanov I., McCue P.A. – Baltimore, Philadelphia, London, Paris etc.: Williams and Wilkins, A Waverly Co., 1996.
7. “Muir’s Textbook of Pathology” Eds. R.N.M. MacSween, K. Whaley London: ELBS, 1994 (14th).
8. “Pathology” Eds. Rubin, J.L. Farber – Philadelphia: Lippincott Raven Publ, 1998 (3th).
9. “Pathology Illustrated” Govan A.D.T., Macfarlane P.S., Callander R. – Edinburgh: Churchill Livingstone, 1995 (4th).
10. “Robbins Pathologic Basic of Disease” Eds. R.S.Cotran, V.Kumar, T.Collins – Philadelphia, London, Toronto, Montreal, Sydney, Tokyo: W.B.Saunders Co., 1998 (6th).
11. “Wheater’s Basic Histopathology. A Color Atlas and Text” Burkitt H.G., Stevens A.J.S.L., Young B. – Edinburgh: Churchill Livingstone, 1996 (3th).
12. “Color Atlas of Anatomical Pathology” Cooke R.A., Steward B. – Edinburgh: Churchill Livingstone, 1995 (10th).
13. “General Pathology ” Walter J.B., Talbot I.C. – Edinburgh: Churchill Livingstone, 1996 (7th).
14. “Concise Pathology” Parakrama Chandrasoma, Glive R. Taylor.
15. “Pathology” Virginia A. LiVolsi, Maria J. Merino, John S. J. Brooks, Scott H. Saul, John E. Tomaszewski, 1994.
16. “Short lectures on pathology” Zagoroulko A., 2002
17. “Robbins pathologic basis of diseases” Cotran R., Kumar V., Collins T.
18. “General pathology” Dr. Fatma Hafez, 1979.
19. “Anderson’s Pathology ” Damjanov I., Linder J. – St. Louis: Mosby Inc., 1995 (10th).

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