

Immunology

Archive

Lecture 9

Hyper Sensitivity Reactions

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1) A transfusion reaction due to being given the wrong blood type is which of the following types of hypersensitivity reactions?

- a) Type I hypersensitivity.
- b) Type II hypersensitivity.
- c) Type III hypersensitivity.
- d) Type IV hypersensitivity.
- e) Type 5 hypersensitivity.

Answer: B

2) All of the following are true about immune-complex mediated type III hypersensitivity except Select one:

- a) immune-complex can formed by serum products.
- b) Tissue damage can be caused by complement activation.
- c) Includes the Arthus reaction.
- d) Requires cytotoxic T cells.
- e) Damage caused by neutrophils and platelets

Answer: D

3) which is related to Hyper acute rejection?

- a) type 1 hypersensitivity
- b) type 2 hypersensitivity
- c) type 3 hypersensitivity
- d) type 4 hypersensitivity

Answer: B

4) we use the blood levels of ANA and anti-DS DNA antibody to diagnosis the

Tissue biopsy

5) IL-10 is produced by

- a) TH2
- b) TH1
- c) IL-5

Answer: A

6) Acute rejection?

- a) Type 1 hypersensitivity
- b) Type 2
- c) type 3
- d) type 4
- e) type 4 and 1

Answer: D

7) Anti-CD20 used Select one:

- a. in Hypersensitivity reaction
- b. in Autoimmunity
- C. in Immune deficiency
- d. to Activate B cell
- e. to Activate T cell

Answer: B

8) All of the following are autoimmune disorders except Select one:

- a) Graves disease
- b) SCID
- c) Rheumatoid arthritis
- e) SLE

Answer: B

9) Which one of the following autoimmune diseases is not a type iv hypersensitivity:

- a. Type 1 diabetes
- b. Hashimoto thyroiditis
- C. Multiple Sclerosis
- D. Systemic Lupus Erythematosus
- e. Rheumatoid arthritis

Answer: D

10) Which of the following best describes the problem in Type I diseases?

- a) Autoimmune response that abnormally stimulates tissue function.
- b) Immune deficiency disease
- c) Autoimmune response that results in tissue destruction
- d) type 2 Hypersensitivity reactio
- e) Immune complex disease

Answer: c

11) Antibody-dependent cellular cytotoxicity (ADCC) is the process by which natural killer cells destroy infected cells, identified by what immunoglobulin on the surface?

Select one:

- a) IgA
- b) IgD
- c) IgE
- d) IgG
- e) IgM

Answer: d

12) Which of the following are secreted by macrophages after they have recognized pathogens using pattern recognition molecules (induction phase)?

Select one:

- a) IL-8
- b) IL-4
- c) IL-7
- d) IL-5
- e) TNF

Answer: e

13) Rheumatoid arthritis mostly occur in individuals carrying

Select one:

- a) HLA-DR4 gene (HLA-human leucocyte antigen)
- b) HLA-DR1 gene
- c) HLA-DR3 gene
- d) HLA-DR2 gene
- e) HLA-DR5 gene

Answer: a

14) The inappropriate response of immune system towards a relatively harmless foreign antigen causing harm to the host is referred as

Select one:

- a) Hypersensitivity
- b) auto-immune diseases
- c) immunodeficiency
- d) tolerance
- e) immune surveillance

Answer:A

15) Which of the following molecules secreted by Mast cells are lipid metabolites and increase vascular permeability?

Select one:

- a) Histamine.
- b) heparin.
- c) Leukotrienes
- d) Tryptase
- e) Proteoglycan

Answer: c

16) Promotes IgE synthesis Select one:

- a) IL-4
- b) IL-10
- c) Interferon-gamma
- d) IL-2
- e) Tumor necrosis factor beta

Answer: a

17) All of the following are typical granulomatous reaction EXCEPT:

Select one

- a) Reaction to persistent antigens
- b) Presence of CD4+ T lymphocytes
- c) Multinucleate giant cells
- d) Epithelioid cells
- e) Large numbers of plasma cells

Answer:E

A patient presents for a follow-up visit after a diagnosis of systemic lupus erythematosus (SLE). Which of the following is the most likely?

Select one:

- a) C4 gene mutation
- b) C5-C9 deficiency
- c) Early neutrophils deficiency
- d) Hyper IgM syndrome (HIM)
- e) Selective IgA deficiency

Answer:A

Which cell produces IL-12?

Select one:

- a) Macrophages
- b) Eosinophil
- c) Neutrophil
- d) Mast cell
- e) B Cell

Answer:A

What is the pattern of staining on a renal biopsy for Goodpasture Syndrome?

Select one:

- a) Linear
- b) Globular
- c) Zigzag
- d) Granular
- e) Circular

Answer:A

All of the following are true about delayed-type hypersensitivity Except
Select one:

- a) is mediated by T lymphocytes.
- b) includes contact sensitivity
- c) includes the tuberculin reaction.
- d) includes penicillin allergy
- e) includes granuloma formation

Answer:d

Hemolytic disease of the newborn due to RhD incompatibility depends
the. _

Select one:

- a) trans placental passage of anti-RhD IgG antibodies.
- b) trans placental passage of anti-RhD IgM antibodies
- c) production of cytotoxic antibodies by the baby
- d) The first pregnancy of the RhD+mother with RhD-fetus
- e) Transplacental passage of anti-RhD IgA antibodies

Answer: A

In MS, we have CD4+ involvement; which one is expected:

Select one:

- a) IL-2, IL-4, IF-gamma
- b) TGF-B
- c) TNF alpha
- d) IL-4, IL-5
- e) IL-10

Answer: C

A transfusion reaction due to being given the wrong blood type is which
of the
following types of hypersensitivity reactions?

Select one:

- a) Type I hypersensitivity.
- b) Type II hypersensitivity.
- c) Type III hypersensitivity.
- d) Type IV hypersensitivity

Answer:b

Serum from an AB, Rh negative patient mixed with red blood cells from a patient with _____ and result in _____ ?

Select one:

- a) Type A, no agglutination
- b) Type B, agglutination
- c) Type O, agglutination
- d) Type AB, agglutination
- e) Type A, agglutination

Answer: A

Which of the following are type 3 and 4 hypersensitivity reaction?

Select one:

- a) hashimoto thyroiditis
- b) rheumatoid arthritis
- c) systemic lupus
- d) type 1 diabetes

Answer: b

All of the following complement proteins and cells participate in the clearance of immune complexes EXCEPT:

Select one:

- a) C3b
- b) CR1
- c) CR2
- d) Red blood cells
- e) Liver macrophages (Kupffer cells)

Answer: C

Case: a patient with various lung symptoms and has anti-glomeruli basement membrane antibodies:

Select one:

- a) Graves disease
- b) pemphigus disease
- c) Rheumatoid arthritis
- d) Goodpasture syndrome
- e) chronic granulomatous disease

Answer: D

Which of the following is used to identify autoantibodies as ANA?

Select one

- A ELISA (Enzyme linked immunosorbent assay)
- b fluorescent microscope
- c confocal microscope
- d Western blotting (immunoblotting)
- e flow cytometer

Answer: B

Antigen-antibody precipitation is maximally seen in which of the following?

Select one:

- a. Excess of antibody
- b. Excess of antigen
- C. Equivalence of antibody and antigen
- d. Antigen-Hapten interaction
- e. excess of both antigen and antibody

Answer: C

Which combinations of cytokines most influence whether a CD4+ T cell becomes a TH1 or TH2? Select one:

- a. IL-4 and IL-5.
- b. IL-8 and IFN-gamma.
- C. IL-4 and IL-12.
- d. IL-17 and IFN-beta
- e. IL-2 and IL-5

Answer: C

The RAST measures:

Select one:

- a. Antigen concentration.
- b. IgE antibodies.
- C. IgM antibodies.
- d. Agglutination.
- e. IgG antibodies

Answer: B

thrombotic thrombocytopenic purpura is an example of which type of hypersensitivity reaction?

Select one:

- a) Type I
- b) Type II
- c) Type III
- d) Type IV
- e) Type 5

Answer: B

Tuberculosis

Select one:

- A. Delayed type hypersensitivity
- B. Immune complex formation
- C. Cytotoxic/cytolytic antibody reactions
- D. Anaphylactic reactions
- E. Autoimmunity

Answer: A

In delayed type hypersensitivity: which one is true

Select one:

- a) Release of interferon gamma and other factors leads to macrophage activation
- b) CD4+ Th2 cells are principal lymphocytes involved
- c) The reaction is maximal 2 to 6 hours after first antigen exposure
- d) involve antibodies in the reaction
- e) High reactivity in a mixed leukocyte culture would provide evidence that the transplant donor and recipient are good match

Answer: A

Which of the following immune mechanisms is MOST important in Graves disease :

- a. Delayed type hypersensitivity
- b. Immune complex formation
- C. Cytotoxic T cell reactions
- d. inactivation due to antibody binding
- e. long activation due to antibody binding

Answer: E

Which one of the following autoimmune diseases is not a type iv hypersensitivity:

- a. Type 1 diabetes
- b. Hashimoto thyroiditis
- C. Multiple Sclerosis
- D. Systemic Lupus Erythematosus
- e. Rheumatoid arthritis

Answer: D

A woman who is Rh+ has a first child with a man who is Rh- What, if any, are the likely consequences if the woman has a second child with the same man:

- a. No problem expected
- b. The second child is at risk to develop myasthenia gravis.
- C. The mother will develop hemolytic anemia.
- d. The second child has at least a 50% chance of developing hemolytic anemia of the new born.
- e. The second child has 100 % chance of developing hemolytic anemia of the new born.

Answer: D

what type of cytokine mediated hypersensitivity reaction

- A-1
- B- 2
- C-3
- D-4
- E-5

Answer: D

one of the following diseases is type 2&3 hypersensitivity reaction

- A- lupus
- B- type 1 diabetic
- C- romantic fever
- D- ulcerative colitis
- E- Crohn's disease

Answer: A