Immune system disorders

*Learning objectives:-

1- Classify disorders of the immune system.

2-Identify mechanisms of hypersensitivity reactions.

3-Define (immediate hypersensitivity, allergy, allergen.)

4-Identify types of immediate hypersensitivity.

5- Describe the two phases of local reaction of type I hypersensitivity.

6-Discuss the role of mast cell in type I hypersen.

7-Discuss the role of basophil in type I hypersen.

8-Explain the mechanism of immediate hypersen.

9-List the categories of mediators in type I hypersen.

10-Discuss the types,formation,sources, & actions of mediators of type I hype.

Disorders of immune system

1-

2-

3-

4-

Introduction to hypersensitivity reaction

*Human-------Environment-------Ag.

*Types of Ags.

*Types of hypersensitivity reactions

Immediate hypersensitivity

-Definition of:

*Type I hypersensitivity.

*Allergy.

*Allergen.

*Atopic allergy.

*Systemic anaphylaxis.

Types of immediate hypersensitivity

1- Local immediate hypersensitivity reactions.

-Allergen.

-Examples.

2-Systemic anaphylaxis.

-Characteristics.

Local reaction

*Phases:-

1-Immediate, or initial response.

2-Second, late-phase reaction.

Mast cell

*Characteristics.

Basophil

*Characteristics.

Mechanism of type I hypersensitivity

-Ags.
-Dendritic cell.
- Naive CD+ helper T cell.
-TH2 cell.(IL-3,4,5,13, GM/CSF,chemokines).
-IgE B cell.
-IgE antibody.
-Mast cell. IL-3,5
Gross-linking
Release of primary & secondary medi.
-Effects

Mediators of type I hypersensitivity

-Types.

-Formation.

-Sources.

-Actions