

فسلجة الامراض النظري
المرحلة الثالثة
الفصل الاول



كلية الرشيد الجامعة
قسم الصيدلة
٢٠١٨ - ٢٠١٩

Introduction to Pathophysiology

Lec. (1)

Assis. Prof. Dr. Muna Salih Daoud

Key principles & medical terms of pathophysiology

- ▶ Pathophysiology
- ▶ Diagnosis
- ▶ Etiology
- ▶ Idiopathic
- ▶ Iatrogenic
- ▶ Predisposing factors
- ▶ Pathogenesis
- ▶ Acute disease
- ▶ Chronic disease
- ▶ Subclinical
- ▶ Latent
- ▶ Incubation



Cell Injury, Adaptation & Cell Death:

- ▶ Definition of cell injury:
- ▶ Causes (etiology):
- ▶ Pathogenesis:
- ▶ Cellular adaptations to injurious stimuli:
 - ▶ Aplasia
 - ▶ Hypoplasia
 - ▶ Atrophy
 - ▶ Hypertrophy
 - ▶ Hyperplasia
 - ▶ Metaplasia



Morphological changes of cell injury:

- ▶ Reversible cell injury: also called degeneration
- ▶ Classification of degeneration:
 - ▶ Primary changes in the cell:
 - Intracellular accumulation of water
 - Intracellular accumulation of fat
 - Intracellular accumulation of CHO
 - Intracellular accumulation of proteins
 - ▶ Interstitial accumulation compressing the cells:
 - Amyloid
 - Hyaline changes
 - Mucinous changes
 - Fatty infiltration



▶ Irreversible cell injury:

A. Necrosis: is a sequence of morphological changes that follows cell death in a living tissue and always associated with inflammation. The morphological changes include:

- ▶ Cytoplasmic changes
- ▶ Nuclear changes

▶ Morphological types of necrosis:

- ▶ Coagulative necrosis
 - ▶ Liquefactive necrosis
 - ▶ Caseous necrosis
 - ▶ Fat necrosis
 - ▶ Gangrenous necrosis
-



▶ Irreversible cell injury:

B. Apoptosis: a form of cell death in which a programmed sequence of events leads to the elimination of cells without releasing harmful substances into the surrounding area.

▶ Why should a cell commit a suicide (apoptosis)?

- ▶ Programmed cell death is needed for proper development as mitosis is
- ▶ Programmed cell death is needed to destroy cells that represent a threat to integrity of the organism

