Mechanisms and Manifestations of Disease Lecture 2

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Part 1: Resolution of the Inflammatory Response (cont'd)-Necrosis

Necrosis or Infarction

- Definition-localized cell or tissue death
- Causes:
  - Thromboembolism
  - Vascular spasm
  - Trauma
  - Infection
  - Hypersensitivity response
  - Intense inflammatory response

Characteristics of Necrosis

- Adjacent tissue inflamed
- Outcome depends on:
  - organ reserve
  - infection of necrotic tissue
  - repair with cellular regeneration-scarring
  - sloughing of necrosis-ulceration
  - encapsulation by fibrous connective tissue and calcification
- Enzyme leakage-diagnostic, e.g. liver, heart, muscle

Types of Necrosis

- Coagulative necrosis-gangrene (dry or moist)
- Liquefactive necrosis
- Caseous necrosis

Coagulative Necrosis

Cell Replacement

- No replacement after cell death-cardiac muscle and neurons
- Fast replacement-blood cells (120 days)
  - Cells lining body surfaces like skin and intestinal mucosa (chemotherapy affects these cells)