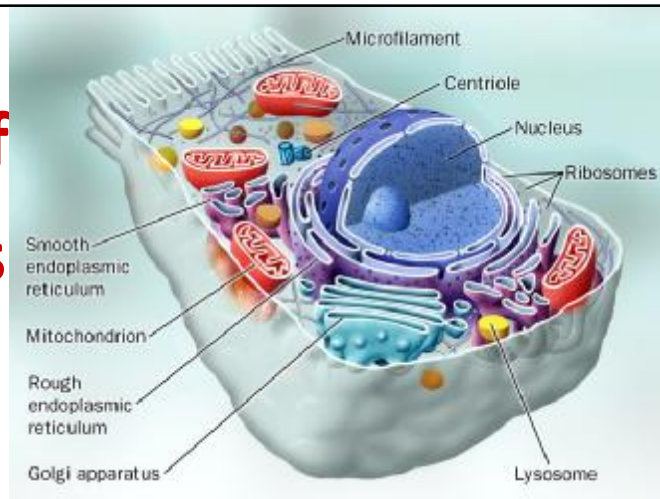


Types of necrosis



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Types of Necrosis

- I. Coagulative necrosis
- II. Liquefactive necrosis
- III. Caseous necrosis
- IV. Fatty necrosis
- V. Gangrenous necrosis
- VI. Fibrinoid necrosis

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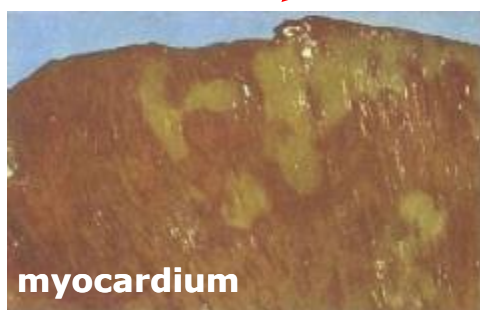
I. Coagulative necrosis

- The most common type of necrosis
- **Defined as** death of cells with preservation of the basic structural outlines of the cells for days, with preservation of the general tissue architecture
- Protein denaturation overcomes enzymatic digestion
- Seen in most organs after hypoxia/ischemia except brain

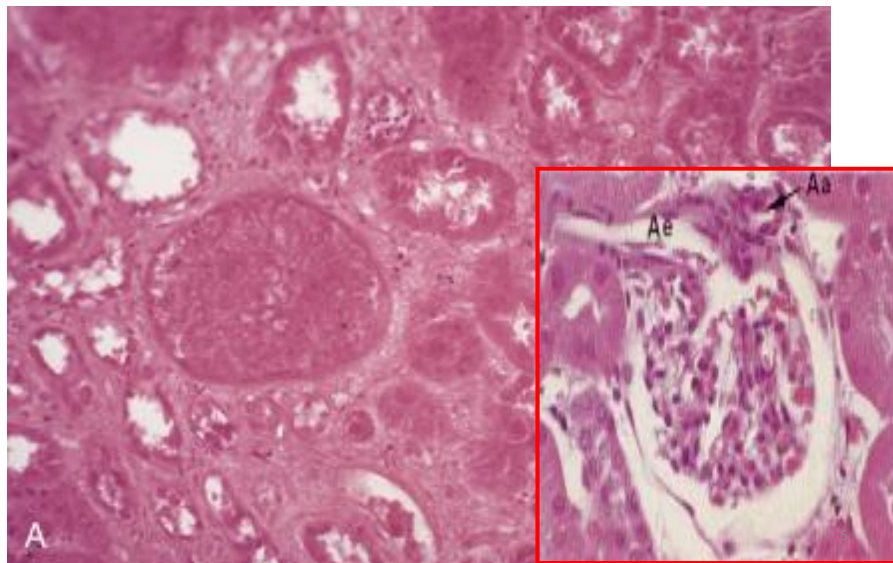
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I. Coagulative necrosis

Ischemia



Kidney infarct exhibiting **coagulative necrosis**, with loss of nuclei and clumping of the cytoplasm but with **preservation of basic outlines of glomerular and tubular architecture**

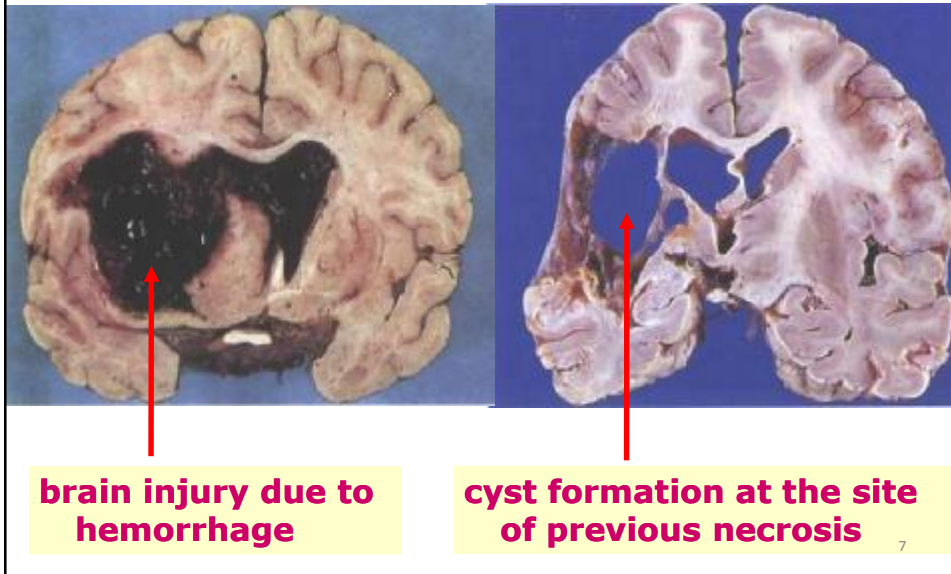


II. Liquefactive necrosis

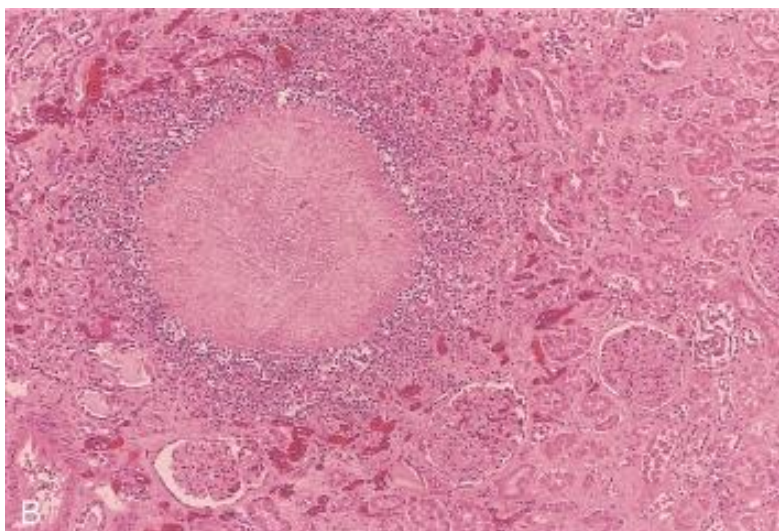
- **Defined as** necrosis with complete digestion of the cells and destruction of the normal architecture
- Enzymatic digestion overcomes the denaturation
- **Two situations:**
 1. **hypoxic/ischemic injury of the brain**
 2. **bacterial/fungal infection**, with accumulation of WBCs and release of enzymes

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II. Liquefactive necrosis



A focus of **liquefactive necrosis** in the kidney caused by fungal seeding. The focus is filled with white cells and cellular debris, creating a renal abscess that obliterates the normal architecture

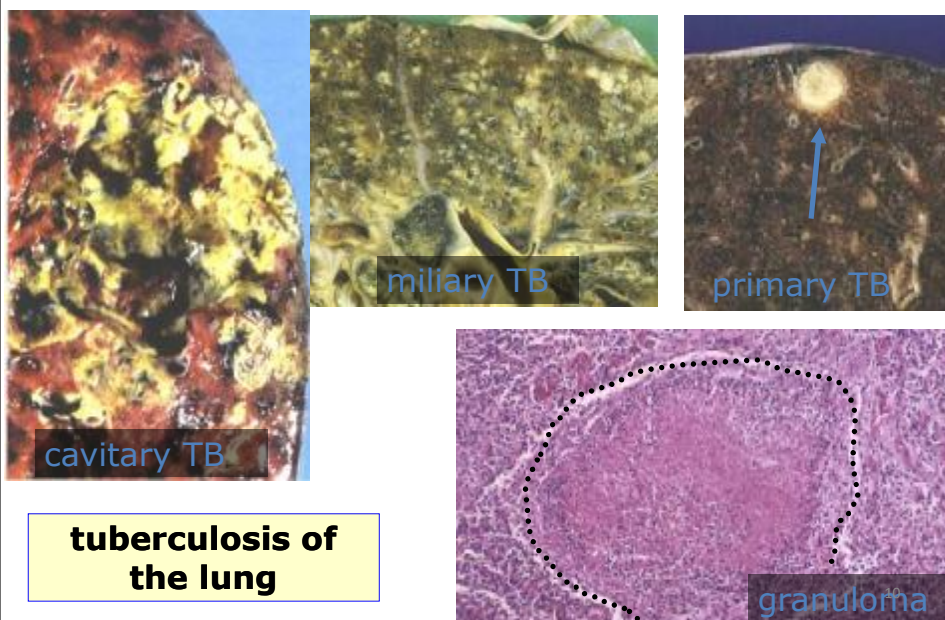


III. Caseous necrosis

- Special type of necrosis, **seen with tuberculosis infection**
- the tissue architecture is completely obliterated
- **Grossly:**
cheesy white appearance to the necrotic focus
- **Microscopically:**
the necrotic focus is composed of structure-less amorphous granular debris

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III. caseous necrosis



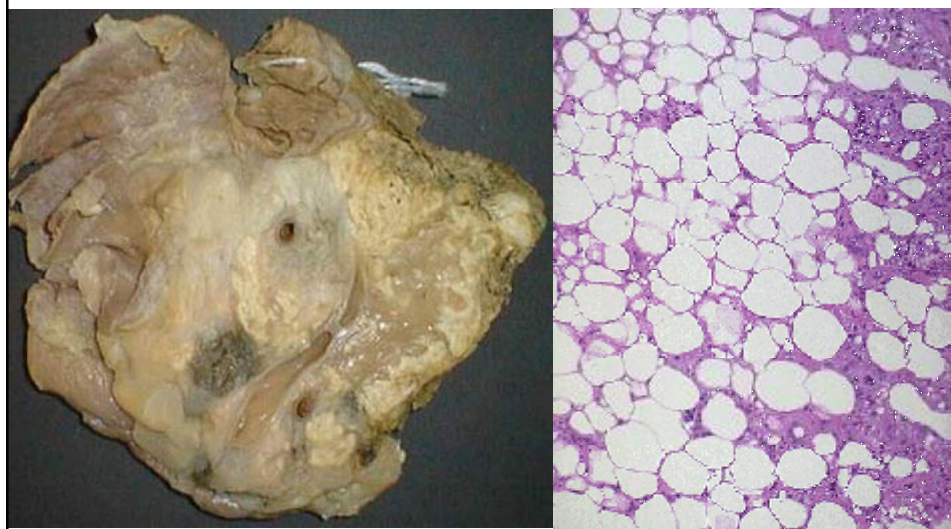
IV. Fatty necrosis

- Special type of necrosis with focal areas of fat destruction
- **Seen with acute pancreatitis**, due to release of enzymes from the injured pancreas
- **Grossly:**
fat saponification: visible white chalky areas
- **Microscopically:**
shadows of cells with calcification

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IV. fat necrosis

acute pancreatitis



V. Gangrenous necrosis

- It is not a distinctive pattern of cell death the term is still commonly used in surgical practice.
- It refers to **ischemic coagulative necrosis (Dry gangrene: frequently of a limb)**
- When there is superimposed infection with a liquefactive component, the lesion is called "**wet gangrene**"

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V. Gangrenous necrosis



**bowel infarct:
wet gangrene**

fresh



old



**dry gangrene in
diabetes**

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