

NECROSIS.

Necrosis is a type of cell death that is associated with loss of membrane integrity and leakage of cellular contents culminating in dissolution of cells, largely resulting from the degradative action of enzymes on lethally injured cells and the leaked cellular contents elicit a local host reaction, called inflammation, that attempts to eliminate the dead cells and start the subsequent repair process.

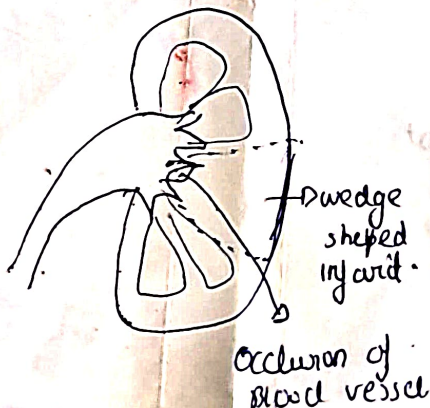
MORPHOLOGY

the general changes occurring.

- ↳ cytoplasmic change → ↑ eosinophilia.
- ↳ Nuclear changes → moth eaten appearance of cytoplasm.
- ↳ pyknosis → shrinkage of nucleus & deeply basophilic.
- ↳ karyolysis → basophilic of chromatin fades.
- ↳ karyorrhexis → Nucleus breaks into fragments.

Types (5)

- Coagulative
- Liquefactive
- (gangrenous)
- Caseous
- Fat
- Fibrinoid.



Coagulative necrosis

It is a form of necrosis in which the underlying tissue architecture is preserved. → tombstone appearance.

1. It is the most commonest type.
2. It is characteristically seen in infarct of solid organs except brain.
3. Cause: ischemia caused by obstruction in a vessel.
- mechanism → ischemia denatures and coagulates structural proteins and enzymes.
- GROSS Site: solid organs - Heart, K, spleen & exception brain.
- affected area is dry, pale, yellow & firm.
- appears wedge shaped in kidney & spleen.
- MICROSCOPY
- Outline of cells are retained but their cytoplasmic and nuclear details are lost.
- tombstone appearance.
- Nuclear changes - karyolysis, karyorrhexis & pyk.
- there is no liquefaction.

Fibrinoid Necrosis

diag.

- It is characterised by deposition of fibrin-like material which has staining properties of fibrin. (such as - PTAK stain.)

Causes

- In immune-mediated vascular injury in which complexes of Ag-Ab are deposited in walls of arteries.

eg:
→ Aschoff bodies in Rheumatic fever

Microscopy

- brightly eosinophilic, hyaline like deposition in vessel wall.

Fibrinoid necrosis is seen in:

- polyarteritis nodosa
- malignant hypertension.

Granulomatous Necrosis

- Necrosis - usually with suppurative putrefaction.

Gummata Necrosis

→ in spirochetal infection (syphilis)