

- The kidneys and the spleen have end arteries that do not anastomose any sudden occlusion leads to infarction
- in vessels narrowed by atheroma, sudden drop in blood pressure can

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- Lead to infarction eg watershed infarction in brain and global infarct in the heart
- tissue metab and ischaemia depends on

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a. type of cell

Parenchymal cells of tissue with high metab rate are susceptible to acute and chronic ischaemia

 support tissue such as fibrous connective ts, fatty ts, bone and cartilage are less susceptible

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- b.use exogenous fuel as opposed to endogenous fuel
- c. ability to have anaerobic metabolism
- brain and heart have high metabolic rates and rely on

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Exogenous fuel with limited endogenous stores of fuel as such they have poor tolerance to hypoxia and ischaemia

 in normal metabolism of fats oxygen is required

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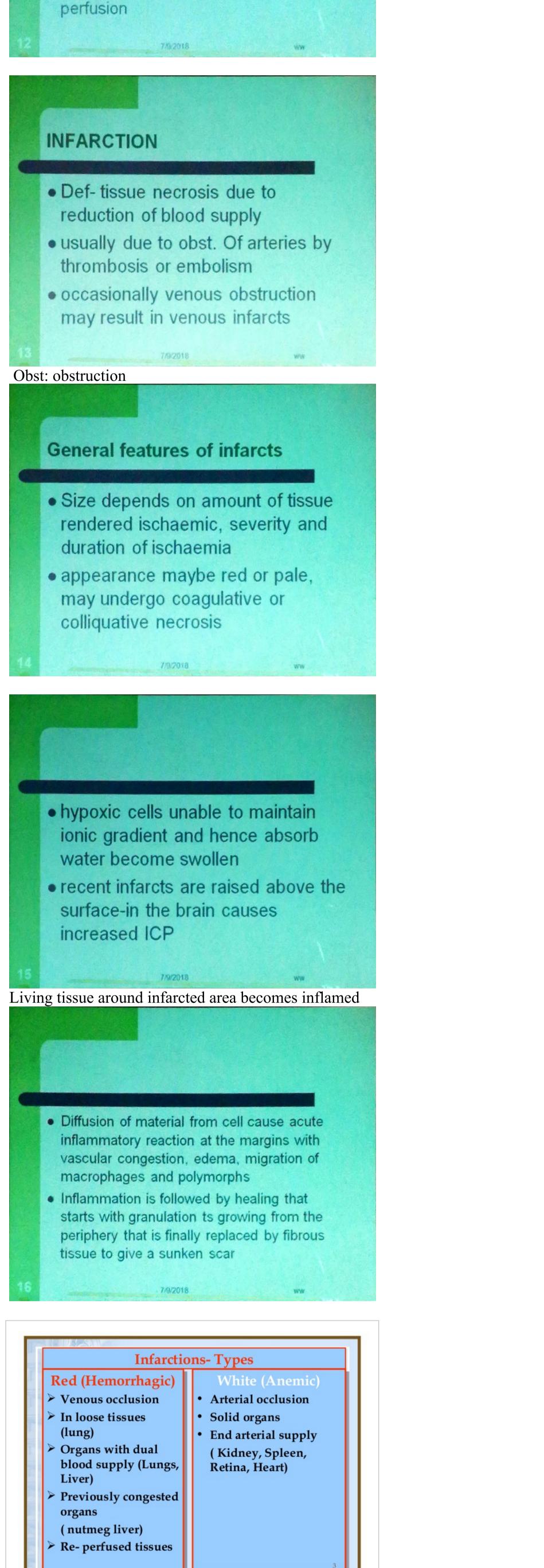
 In ischaemia triglycerides are not oxidized and glycogen is only broken down to pyruvate and eventually to lactate' this results in release of enzymes that can be assayed to confirm tissue necrosis E.g. heart, liver and skeletal muscle

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restoration of blood flow results in reperfusion injury due to increased

 treatment with streptokinase and calcium channels blockers reduce formation of free radicals in re-

formation of free radicals



MYOCARDIAL INFARCTION

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- Arises due to occlusive thrombosis supervening on atheroma of major coronary artery
- it undergoes coagulative necrosis giving a pale infarct
- with time a fibrous scar ts forms
- Inner region of the heart may undergo necrosis leading to subendocardial

Low BP- leads to global subendocardial infarction

- Global MI is circumferential and occurs in sudden drop of BP in a patient with severe atheroma of the coronary arteries
- CEREBRAL INFARCTS may be pale or haemorrhagic, due to high brain water content has colliquative necrosis

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 Removal of infarct is by marcrophages (gitter cells) and results in residual cavity referred to as apopletic cyst. Eventually contains clear fluid and is walled off by gliosis

Gitter cell: an enlarged phagocytic cell of microglial origin

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Lung infarcts

- Typically dark red
- Conical shape (wedge)
- firm and haemorhagic because bronchial artery bleed into the dead tissue

ctivate Windows now

Splenic infarct

- Conical and subcapsular
- initial red due to congestion but change to pale yellow before it organizes
- seen in splenomegaly and in sickle cell may result in autosplenectomy

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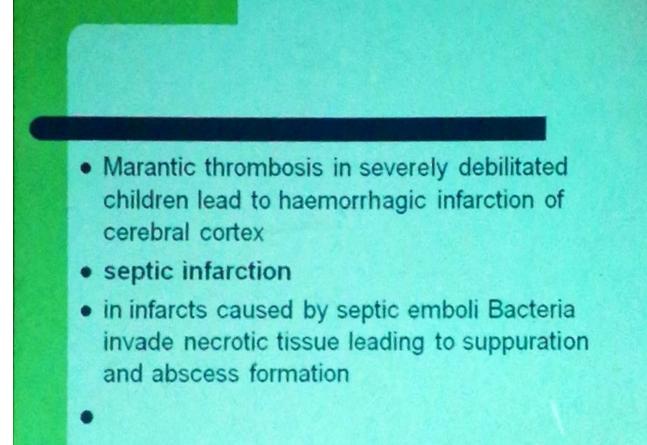
Similar infarcts are seen in kidneys and result in release of renin resulting in hypertension

- venous infarct
- acute renal vein thrombosis results in renal infarction

Renal tumor can grow along the vein causing blockageinfarct

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