



Tikrit University
College of Veterinary Medicine

Cellular degenerative

Subject name: Practical Pathology

Subject year: 2024-2025

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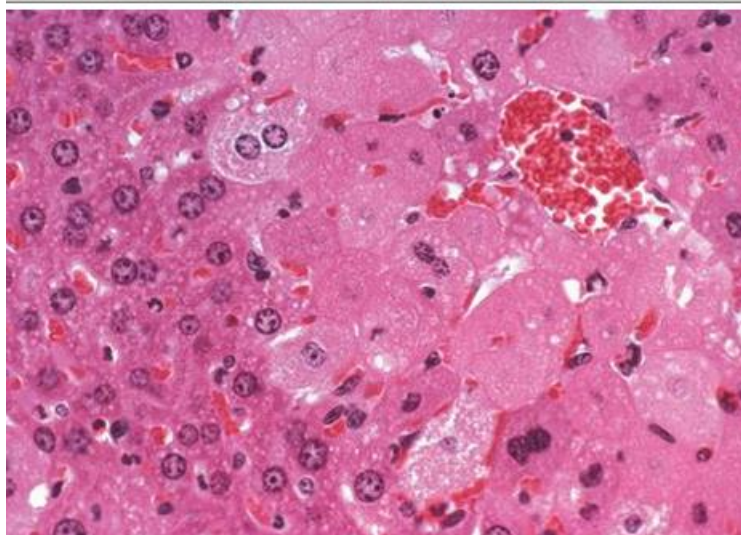
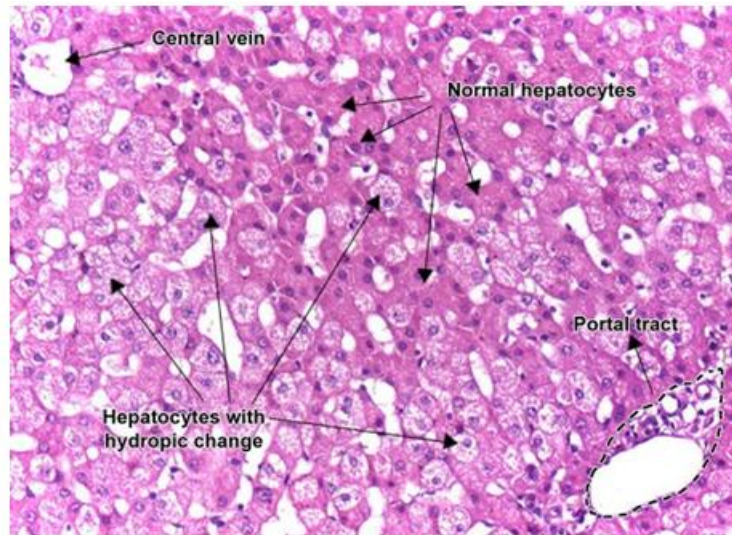


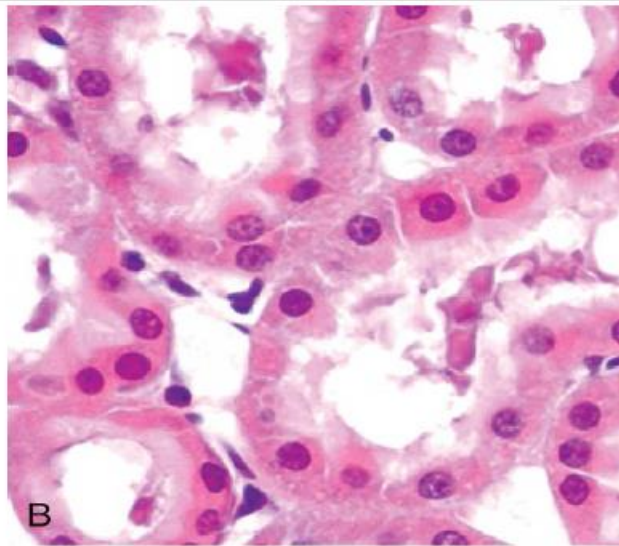
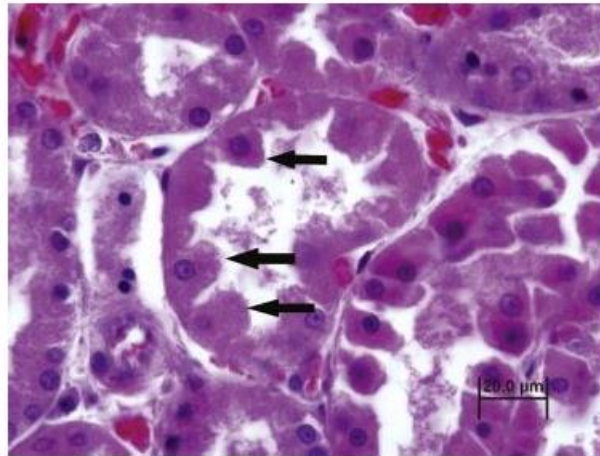
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Lecturers link

Organ: Liver

Lesion: The histopathological examination of liver cells showed increased eosinophilia, clear vacuoles within the cytoplasm, and more granular than normal; swelling of occasional cells and their edges of cells become rounded with a normal nucleus in central position.

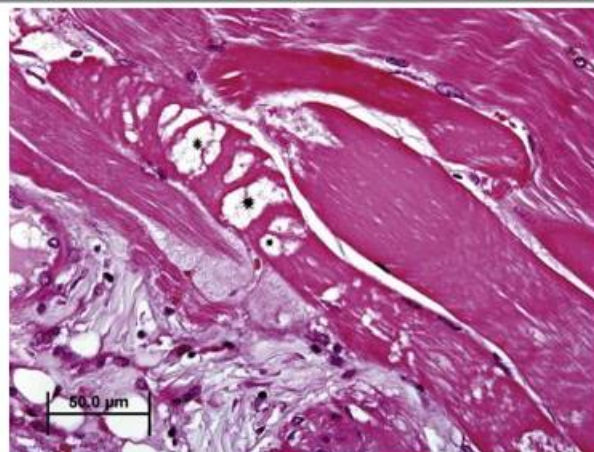
Diagnosis: Cloudy swelling.





(Courtesy of Dr. Ross Pinkard and M.D. Venkatesh Babu, University of Texas Health Sciences Center, San Antonio, TX.)

Cell swelling. Swollen renal tubular epithelial cells of PCT; Note the bulging of the apical portions of the cells (arrows), loss of brush border, and elevation of the nuclei from the basal portions of the cells.

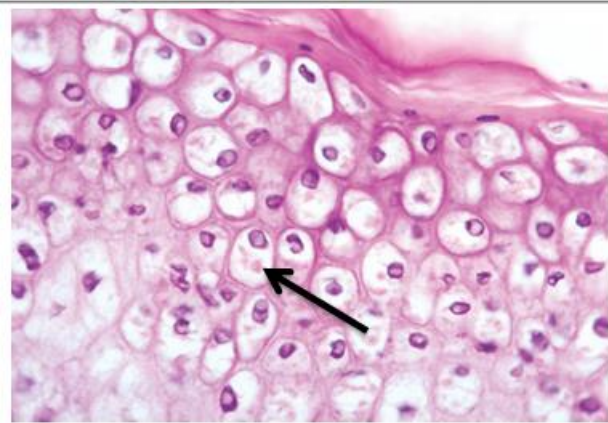


Cell swelling. Vacuolar change in muscle is characterized by clear vacuoles (starbursts) as well as separation of myofibrils with loss of striations.

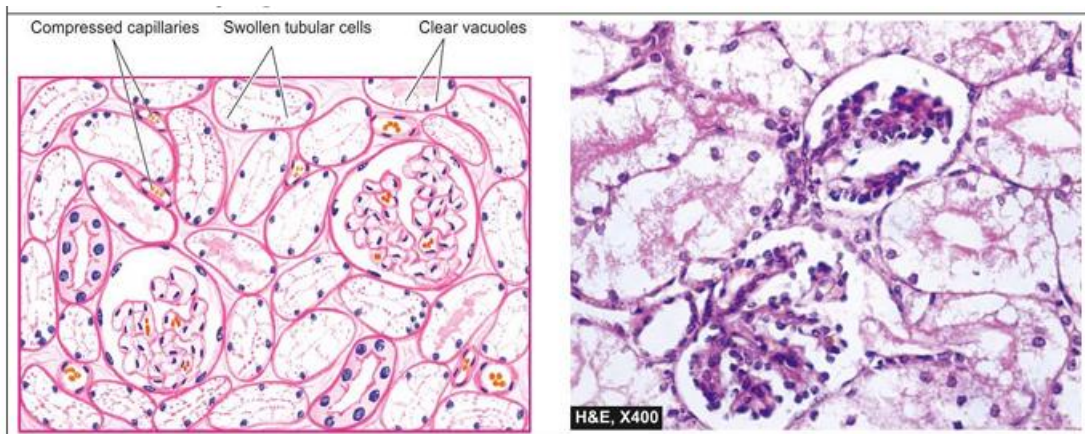
Organ: Liver

Lesion: The histopathological examination of hepatocyte cells is swollen and their cytoplasm contains multiple small clear vacuoles may be coalescing to form large one vacuole and hence the term vacuolar degeneration. These vacuoles represent distended cisternae of the endoplasmic reticulum. {Note cytoplasmic viral inclusion bodies in viral infection}. The nucleus may appear pale.

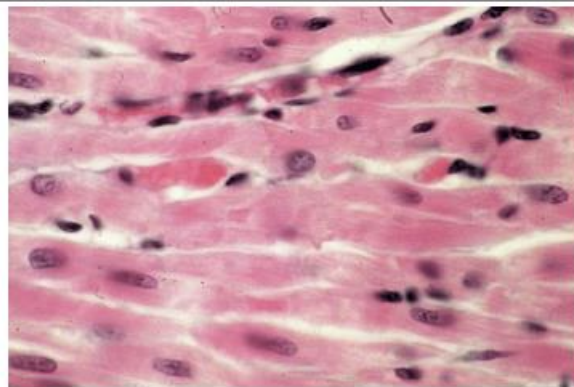
Diagnosis: Hydropic degeneration.



Oral mucosa: These cells may become very large (ballooning degeneration) and eventually rupture. Some of the cells have viral inclusion bodies (arrows).



Hydropic change kidney. The tubular epithelial cells are distended with cytoplasmic vacuoles while the interstitial vasculature is compressed. The nuclei of affected tubules are pale.

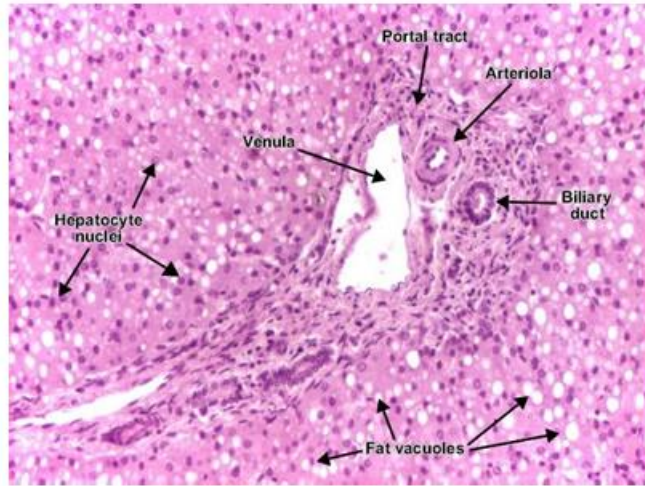


Heart muscle: Hydropic degeneration of muscle fibers with loss striation of muscle ; the cells are swelling with focal myocytolysis

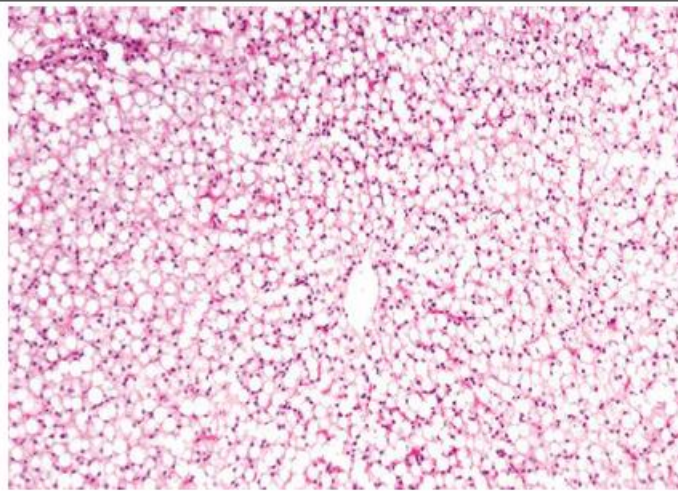
Organ: Liver

Lesion: The histopathological examination of hepatocyte cells is distended with different size & shape of fat vacuoles pushing the nuclei to the periphery (macrovesicles). The accumulation of fatty materials inside the cytoplasm in which appear empty because of agents used in slide preparation (Alcohol).

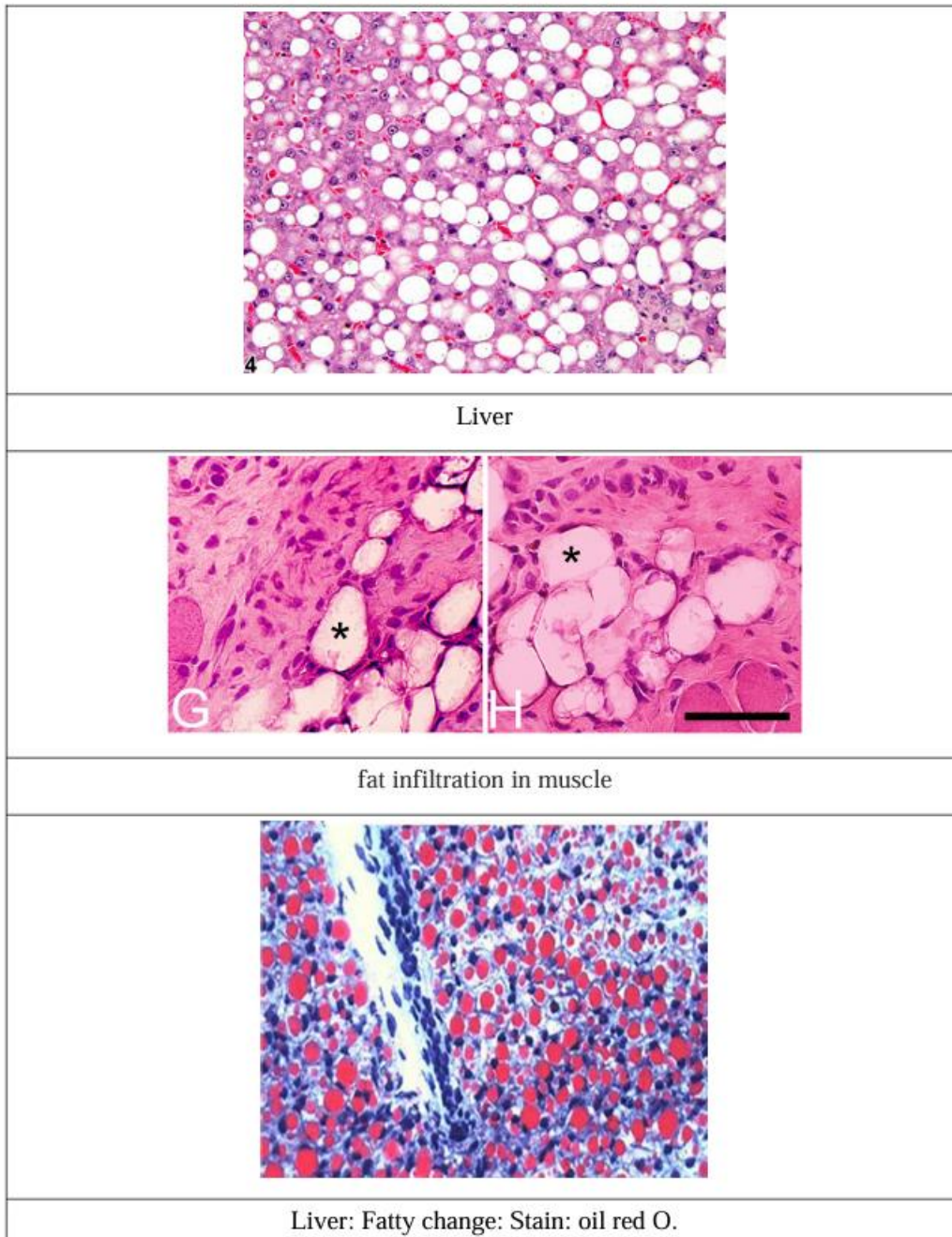
Diagnosis: Fatty degeneration



Liver



Liver

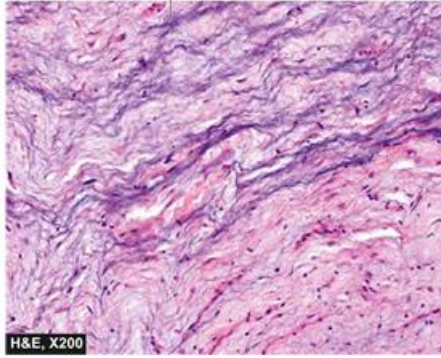


Organ: Connective tissue

Lesion: The histopathological examination of tissue shows, dermis shows separation of collagen bundles by large quantities of mucin. Satellite fibroblasts are evident. The nuclei of the cells are hyperchromatic deep bluish in color. The Mucoid material takes faint blue color by H & E.

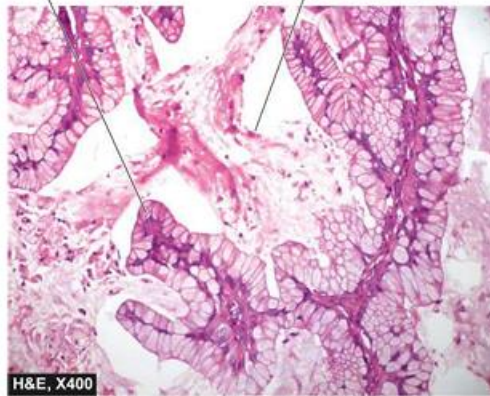
Diagnosis: Mucoid degeneration

Myxoid material



Connective tissue mucin (myxoid change)

Tall columnar mucinous epithelium Mucinous material



Epithelial mucin showing intracytoplasmic mucinous material in the epithelial cells lining the cyst