



ECVP/ESVP Summer School in Veterinary Pathology

Summer School 2014 – Toxicological Pathology (181)

Slide 6. H-5 (90-11362) Goat

Description (14)

Small hepatic lobules (1)

Loss of **centrilobular** hepatocytes – replaced by necrotic debris, inflammatory cells – neutrophils, mononuclear cells, **fibroblasts**, and hemorrhage (5). Some remaining cells contain pigment (1).

Multifocal apoptosis (single cell necrosis) (2), Mitotic figures (1)

Karyomegaly, cytomegaly, scattered (1)

Bile canicular and bile ductular stasis (1)

Prominent perisinusoidal or Ito cells (1)

Subcapsular hemorrhage, serositis (fibrin, inflammatory cells) (1)

Morphologic Diagnosis(es) (5)

Hepatocellular necrosis, centrilobular, severe, subacute with bridging and karyocytomegaly (4)

Acute individual cell necrosis/apoptosis (1)

Cholestasis, intracanalicular and bile ductular, mild

Possible cause(s) (2)

Plant toxicity e.g., those containing pyrrolizidine alkaloids

Copper toxicity

Combination of above

Comment: copper toxicity is often superimposed on plant toxicity

Case information: 11 yr female goat.

Gross findings: “ nutmeg” (chronic congestion) liver, gall bladder filled with bloody fluid, congested lung

Liver copper 623 pm dry weight, kidney copper 131 ppm

Kidneys – nephrosis with regeneration, orange-red casts