



ECVP/ESVP Summer School in Veterinary Pathology



Marie Curie Training Courses

Summer School 2005 – Urinary Tract Case 3

Case 3 (S04-0861.13)	Points
<p>Species: Sheep Organ: Kidney</p> <p>Description: Throughout the kidney, multifocally, tubular epithelial cells are <u>hyper eosinophilic, show pyknotic nuclei and sometimes karyorrhexis (severe tubulonephrosis)</u>. A large number of tubular epithelial cells are detached from the basal membrane, rounded and sloughed into the tubular lumen. In the cytoplasm of a large amount of tubular cells highly eosinophilic to orange, homogenous, dropletforming material can be found (<u>reabsorption of protein and hemoglobin</u>). The same proteinaceous material is visible in some Bowmann's spaces or in abundance in dilated tubuli (<u>severe hemoglobin- and proteinuria</u>).</p> <p>In the interstitium multifocally homogenous eosinophilic to orange material is visible admixed with cells undergoing karyorrhexis and karyopyknosis (<u>interstitial accumulation of hemoglobin and protein with beginning necrosis</u>).</p> <p>Diagnosis: Severe, diffuse acute tubulonephrosis with prominent hemoglobinuria and moderate proteinuria (hemoglobinuric nephrosis)</p> <p>Etiology: Cooper intoxication</p> <p>Associated lesions: jaundice, acute periacinar hepatic necrosis, hemoglobinuric nephrosis</p> <p>Pathogenesis: Cooper intoxication-lysosomal membranes loose integrity-hydrolases damage the rest-blood cooper concentration rises-damage to erythrocytes-intravascular hemolysis-hemoglobinuric nephrosis</p> <p>Special stains: Rhodamine</p>	