ECVP/ESVP Summer School in Veterinary Pathology

Marie Curie Training Courses

Summer School 2005 – Urinary Tract Case 10

Case 10 (S02-0727.1)	Points
Species: Horse **Organ:** Kidney **Description:** The papillary region of the kidney is necrotic, shows severly dilated collecting ducts filled with normal sloughed to karyorrhektic and pyknotic tubular epithelial cells, few neutrophils and slightly blueish to clear eosinophilic, mucinous material (protein and mucus). In some tubular lumina also granular dark blueish material (mineralization) and brownish material (hemosiderin) can be found. Sometimes the tubular wall is necrotic and infiltrated with neutrophils. The interstitium in this area is highly edematous and diffusely infiltrated with moderate amounts of neutrophils and macrophages and locally-extensive large amounts of erythrocytes (acute bleeding). The macrophages show brownish granular pigment in the cytoplasm mostly in the region of acute bleeding (hemosiderin; longer persisting bleeding). The vessels also in this area are filled with erythrocytes and some neutrophils that sometimes show diapedesis. **Diagnosis:** Severe, focally-extensive, acute papillary necrosis with mineralization (nidus formation) and acute bleeding **Etiology:** Non-steroidal antiinflammatory drugs **Pathogenesis:** inhibition of cyclooxygenase and production of prostaglandins (mostly PGE_2) from arachidone acid, vasodilatatory effect of prostaglandins reduced (arterioles of juxtamedullary nephrons)-ischemic lesion	