



ECVP/ESVP Summer School in Veterinary Pathology



Summer School 2009 – Urinary Tract

Case 1 (S04-1616.11)	Points
<p>Species: Dog Organ: Kidney</p> <p>Description:</p> <p>Multifocally to diffuse most tubular structures but mainly the proximal tubules are dilated and the tubular epithelial cells show <u>hypercyanophilic cytoplasm</u> and sometimes <u>karyorrhectic or pyknotic nuclei</u> (<u>degeneration and necrosis</u>). The cytoplasm of many tubular cells show brownish granular pigment (<u> hemosiderin</u>).</p> <p>Most of the glomeruli (<u>generalized</u>) show lesions that involve part or the whole glomerular structures (<u>segmental or local lesion to diffuse or global lesion</u>). These lesions consist of slight to moderate <u>thickening of the mesangium and of some basement membranes</u> and a moderate increase of the <u>cellularity due to proliferation of mesangial cells (membranoproliferative lesion)</u>. In some glomerular capillaries few <u>neutrophils, less eosinophilic, hyalin material (thrombi)</u> as well as a <u>slight hyperemia</u> can be seen.</p> <p>In the glomerular space moderate to large amounts of eosinophilic homogenous to fibrillar material (<u>fibrin</u>) admixed with few lymphocytes, <u>macrophages and only single neutrophils</u> but a moderate amount of erythrocytes can be seen. (Single glomeruli are hypocellular, condensed and eosinophilic (<u>sclerotic</u>)). The <u>Bowmann's capsule</u> of most glomeruli is mildly <u>thickened</u>.</p> <p>The lumina of some tubules are filled with cellular debris, neutrophils and sometimes with eosinophilic homogenous to waxy material (<u>cast formation/proteinuria</u>), others with erythrocytes. The <u>interstitium is highly edematous</u> and diffusely infiltrated with erythrocytes (<u>acute bleeding</u>) as well as with few lymphocytes, macrophages, sometimes showing brownish granular cytoplasm (<u> hemosiderin</u>) and only single neutrophils, some vessels are dilated and filled with erythrocytes (<u>hyperaemia</u>).</p> <p>Diagnosis:</p> <p>Severe, diffuse acute tubulonephrosis (-necrosis) Moderate, generalized, segmental to diffuse membranoproliferative to moderate, exsudative glomerulonephritis with slight proteinuria, moderate interstitial edema, interstitial acute bleeding</p> <p>Etiology:</p> <p>Leptospira sp.</p> <p>Associated lesions:</p> <p>Icterus, acute lung bleeding</p>	