

## Summer School 2009 – Urinary Tract

### Case 5 (S03-2154.1)

**Points (20)**

**Species:** Porcine

**Organ:** Kidney

**Description:**

All glomeruli (generalized) are severely damaged showing pyknotic and karyorrhectic nuclei and cellular debris (necrosis) and show large amounts of homogenous to fibrillar, eosinophilic fluid (fibrin) admixed with erythrocytes in the Bowman's space and between the glomerular tuft/loops. In the Bowman's space, in the mesangium and in the glomerular vessels moderate to large amounts of pyknotic and karyorrhectic neutrophils are visible. Mesangium cells have large nuclei and good visible single nucleoli as well as cells of the Bowman's capsule (activated). The Bowman's capsule is infiltrated with inflammatory cells mostly consisting out of karyorrhectic neutrophils that are as well periglomerular.

2 points

Periglomerular, in the tubular lumina and only seldom in the interstitium multinucleated giant cells (foreign body type) can be seen. In some tubuli a moderate to large amount of karyorrhectic and pyknotic neutrophils are visible. In the cytoplasm of tubular epithelial cells (proximal tubules mostly) eosinophilic droplets of different diameter are found (protein reabsorption).

2 points

1 point

1 point

Most tubular lumina are filled with homogenous, hyalin to eosinophilic material (prominent cast formation).

1 point

1 point

In the interstitium multifocally some plasma cells, few macrophages and lymphocytes can be seen.

1 point

1 point

2 points

Diffusely small vessels are filled with erythrocytes (hyperemia).

1 point

**Diagnosis:**

Severe, generalized, global exudative glomerulonephritis with prominent proteinuria

2 points

Moderate, multifocal, chronic (lymphoplasmacytic and histiocytic) interstitial nephritis

1 point

**Etiology:**

Porcine Circovirus type 2

1 point

**Associated lesions:**

Depletion or hyperplasia of lymphatic tissue, giant cells with intracytoplasmic basophilic (botryoid) inclusion bodies, interstitial pneumonia, hepatitis

3 points