

ECVP/ESVP Summer School in Veterinary Pathology

Summer School 2014 – Mock Exam

CASE 8 Mouse kidney amyloidosis

Histologic Description	Points
Style	1
90% of glomeruli and 30-40% of the interstitium and tubules are characterized by severe degenerative changes in association with inflammation	2
Glomeruli	0
Global	1
Severe expansion and substitution	1
Abundant homogeneous lightly eosinophilic material (Amyloid)	2
Adhesion of visceral and parietal Bowman capsule (sinecthae)	1
Occasional neutrophils/macrophages/reactive mesangial cells any	0,5
Collapse of glomerular capillaries	0,5
Vessels (of glomeruli and interstitium)	0,5
have expanded walls substituted by	0,5
Intensely eosinophilic granular to homogeneous material (fibrinoid necrosis/fibrinoid change)	1
Occasional karyorecting neutrophils (leukocytoclastic vasculitis)	1
Interstitium	0
Expanded by amyloid (cortical and medullary)	0,5
Occasional multinucleated giant cells	0,5
Perivascular accumulation of mature lymphocytes and plasmacells	1
Tubular changes (distal convoluted, henle's and collector)	0
Dilation	0,5
Luminal homogeneous intensely eosinophilic material (protein casts)	0,5
Occasional luminal neutrophils/macrophages (granular casts)	0,5
Tubular regeneration	0,5
Morphologic Diagnosis	4
<ul style="list-style-type: none"> Renal amyloidosis glomerular global and interstitial locally extensive severe chronic with leukocytoclastic/fibrinoid vasculitis Nephritis perivascular to interstitial lymphocytic plasmacytic multifocal moderate chronic 	
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HD: 90% of renal glomeruli and 30/40% interstitium replaced by degenerative and inflammatory changes. Most glomeruli are expanded and obliterated by a global accumulation of abundant dense pale eosinophilic homogeneous material (amyloid) expanding and effacing tuft architecture. Multifocal accumulation of amyloid is evident in peritubular-perivascular interstitium at cortico-medullary junction. Renal interstitium is diffusely expanded by fibroplasia/fibrosis with Bowman's capsule sclerosis and tubular degeneration/necrosis, scleroatrophy and early tubular regeneration. Scattered tubuli are cystically dilated, lined by attenuated epithelium (atrophy) and filled with homogeneous dense eosinophilic material (hyaline casts) or plugged by necrotic tubular epithelial cells and



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cellular debris (granular casts). Expanding perivascular spaces/adventitia (mostly arteries) and extending into the surrounding interstitium is a dense infiltration of lymphocytes and plasmacells. Intralesional vessels have hypertrophy and hyperplasia of media and intima with lumen obliteration.

MD: Renal amyloidosis glomerular global and interstitial locally extensive severe chronic
Nephritis perivascular to interstitial lymphocytic plasmacytic sclerosing multifocal moderate chronic