



ECVP/ESVP Summer School in Veterinary Pathology



Marie Curie Training Courses

Summer School 2006 – Mock Exam Case 8

8. Tissue from a MOUSE

DESCRIPTION OF THE HISTOLOGICAL FINDINGS

Lung

There is a highly cellular, approximately 0.5 cm in diameter, well demarcated, expansive, unencapsulated neoplasm. The neoplasm consists of tumoral epithelial cells lining pre-existing alveolar walls/septa or bronchioles, or forming new papillary structures, supported by a thin fibrovascular stroma. Tumoral cells are 15 micrometers in mean diameter, cuboidal to cylindrical (low), with a moderate nucleocytoplasmic ratio. Nucleus is basally located; ovoid with finely coarse chromatin, one or several small eosinophilic nucleoli. Cytoplasm is slightly abundant, eosinophilic, focally vacuolated (aspect of Clara cells). Anisokaryosis and anisocytosis are slight, mitotic index is very low (typical aspect of a bronchioloalveolar adenoma). Diffusely an amorphous, eosinophilic (seroproteinaceous) fluid fills the alveolar spaces within the tumour.

Surrounding the neoplasm, multifocally expanding the alveolar spaces of the entire pulmonary lobe are alveolar macrophages presenting a large round granular (crystalline) eosinophilic cytoplasm; an eccentric, euchromatic nucleus with vesicular chromatin. Binucleated or multinucleated macrophagic cells are noticed, 30 to 60 micrometers in diameter. Free or intracytoplasmic (within macrophages) eosinophilic crystals (spicules), up to 20 x 150 micrometers in size, are noticed in alveolar spaces and bronchiolar lumens. Within interstitial spaces, there are perivascular lymphocytes and few macrophages with intracytoplasmic brown pigments.

MORPHOLOGIC DIAGNOSIS/DIAGNOSES

Bronchioloalveolar adenoma (2).

Multifocal, moderate, granulomatous pneumonia with free or intramacrophagic eosinophilic crystals / or: Pulmonary histiocytosis / or: Crystal pneumonitis (2).

MARKS

Lung	1
High cell density, expansive growth, unencapsulated, 5 mm in diameter	2
Neoplastic cells lining alveolar walls or bronchioles	1
Papillary architecture	1
Stroma: thin, fibrovascular	1
Neoplastic cells: shape	1
Neoplastic cells: basal nucleus	1
Neoplastic cells: nucleolus	1
Low mitotic index	1
Alveoli: macrophages, with a granular eosinophilic cytoplasm	2
Bi or plurinucleated macrophages	1
Alveoli: eosinophilic crystals	1
Morphologic diagnoses	4
Design	2