



ECVP/ESVP Summer School in Veterinary Pathology



Marie Curie Training Courses

Summer School 2008 – CNS Case 27

Case 27) 10/96 Tissue from a DOG

Cerebrum: The slide shows a nodular, moderately demarcated, infiltrative, unencapsulated, cell rich mass, measuring about 2 x 1 cm, that extends to cut borders and infiltrates the overlying meninges. The cells are arranged in a closely packed, solid pattern with a scant amount of fine fibrovascular stroma intermixed with pre-existing nervous tissue. The cells are polygonal to pleomorphic, sometimes with multiple, elongated cytoplasmic processes and measure 15 – 100 μ m in diameter.

They have distinct cell borders and a moderate to high amount of a finely granular, eosinophilic cytoplasm. The nucleus to cytoplasmic ratio is about 1:2 to 1:10. The round to polygonal nucleus is excentrically located in most of the cells and demonstrates a finely stippled to vesicular chromatin pattern with an equal amount of eu- and heterochromatin. Each nucleus contains 1-3 clearly distinguishable, basophilic nucleoli. There is a high number of multinucleated tumor giant cells with up to 20 nuclei. The cells demonstrate a high anisocytosis and anisokaryosis. Mitoses range from 0 to 3 per high power field with a high amount of bizarre mitoses. The mass shows multiple small areas with karyorrhexis and karyolysis (necrosis) with a pseudopalisading of tumor cells around this area. Multifocally there are small areas with extravasated erythrocytes (hemorrhage). Occasionally, there are mild, perivascular infiltrates with lymphocytes and rare macrophages.

Morphological diagnosis:
cerebrum, glioblastoma, giant cell type