

Suspected intracranial neoplasia in a Dog: Clinical and diagnostic image findings

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A 10-year-old intact male maltese dog was presented to the Veterinary Medical Teaching Hospital of Konkuk University with 3 weeks history of dullness, ataxia, left side head tilt, and incoordination. Complete blood counts (CBC) and serum chemistry profiles showed no remarkable findings. The neurological assessment revealed decreased postural and proprioceptive reactions in right side limbs (hemiparesis). Other neurological deficits including cranial nerves were not detected. A subsequent MRI revealed the dog had a well defined, round brain mass in an area of right cerebellum and peritumoral edema. The cerebrospinal fluid characteristics were high specific gravity and increased protein concentration. Based on these results, we suspected brain tumor and performed Positron emission tomography (PET). On PET, the lesion which suspected tumor in the right cerebellum showed enhanced uptake and increased glucose metabolism. Then we initiated chemotherapy (CCNU) plus corticosteroid medication. Neurological deficits improved gradually after chemotherapy.

The measurement of tumor glucose metabolism provides information about the tumor for radiation treatment planning and stereotactic biopsies. And Identifying changes in glucose metabolism measured with PET may be particularly important in the evaluation of patients in the course of treatment, particularly those patients being treated with cytostatic drugs.

This case report demonstrate that clinical findings, image characteristics of the suspected brain tumor case and indicate that PET is a non-invasive method to image physiological parameters, which are of interest in the diagnosis and treatment planning of brain tumors.

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