

Positron Emission Tomography (PET) in Two Dogs with Necrotizing Meningoencephalitis

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Necrotizing meningoencephalitis (NME) in dogs is inflammatory brain disease with poor prognosis. Thus, early diagnosis is mandatory. Fluorine-18 fluorodeoxyglucose positron emission tomography (FDG-PET) used for antemortem diagnosis of encephalitis in humans, and this study provide FDG-PET findings in dogs with NME.

A 5-year-old intact female Yorkshire terrier dog and a 7-year-old neutered female Chihuahua dog presented with seizure episode were examined. Physical and neurological examination, complete blood count (CBC), serum biochemical analysis, magnetic resonance imaging (MRI), cerebrospinal fluid (CSF) analysis were performed and brain FDG-PET was acquired. And both dogs were euthanized due to poor prognosis. Histopathologic examination was performed.

Diagnosis of both dogs was confirmed as NME according to clinical findings, MRI findings, CSF analysis, and histopathologic examination. In both dogs, the region of necrosis revealed FDG-PET hypometabolism.

FDG-PET may provide more accurate diagnosis of canine NME adjunct to clinical and MRI findings, and CSF analysis.

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