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TEMPORAL LOBE EPILEPSY IN A 10-YEAR-OLD CAT DUE TO AN INVASIVE INTRACRANIAL NEOPLASM

Introduction

Feline temporal lobe epilepsy (TLE) has been described mostly in laboratory animal models. Recently, feline TLE has been documented and characterized in clinical patients as well ⁽¹⁾. Several predisposing factors or secondary brain pathology have/had been reported. Characteristics of TLE seizure activity are: 1/ attention response, 2/ arrest, 3/ salivation, licking, 4/ facial twitching, 5/ head turning or nodding, and 6/ generalized clonic convulsions ⁽²⁾.

Case

A ten-year-old female neutered domestic shorthair cat was presented with an acute onset of seizures. Neurological examination revealed a decreased menace response for the left eye and decreased facial sensation on the left side. An ictus was recorded (video) in which the cat showed the following sequential signs: attention response, arrest, salivation, facial myoclonus (at the right side) and a (right) head turn. A right forebrain lesion was suspected.

Results and follow-up

MRI of the head revealed an expansive soft tissue mass in the caudal nasal passages involving the ethmoid and extending through the cribriform plate into the cranial cavity (figure 1). A mass effect on the right frontal lobe, temporal lobe and lateral ventricle was present. After intravenous administration of contrast medium, homogeneous enhancement of the mass was observed.

The owners elected euthanasia. Histopathology revealed a malignant undifferentiated tumor. The polymorphic, poorly differentiated neoplasm, presumably of meningeal or glial origin, shows involvement of the olfactory bulbi, frontal lobe cerebral cortex and meninges, and infiltrates the nasal cavity. Differential diagnosis: undifferentiated malignant pleomorphic sarcoma, anaplastic meningioma, sarcomatoid meningioma. Further investigations did not result in a conclusive determination of the neoplasm type.

Conclusions

This is the first report of a cat with TLE secondary to an invasive intracranial neoplasm. If considered a meningioma, this is also the first report of a cat with a primary brain tumor that invaded the nasal cavity ⁽³⁾.

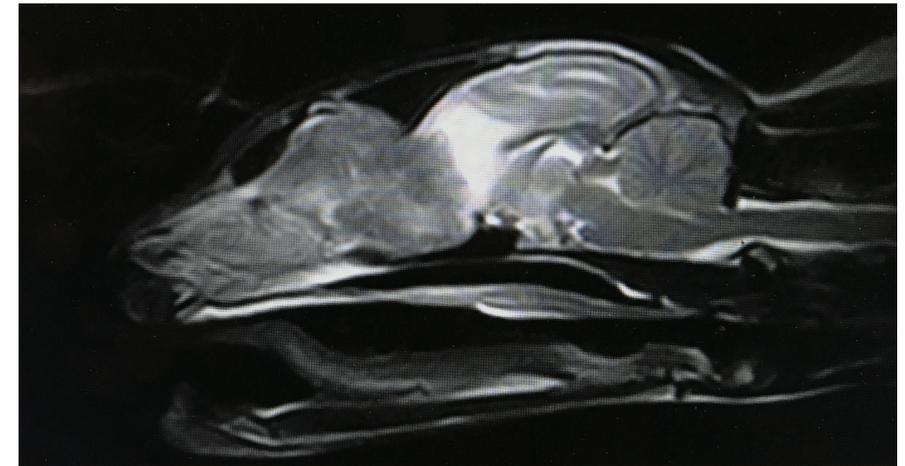


Figure 1: T2-weighted sagittal image of a ten-year-old female neutered domestic shorthair cat with temporal lobe epilepsy. Note the expansive mass and T2-hyperintensity in the frontal lobe area.

References

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