COMPANION ANIMAL
Clinical Cases Award

Electroencephalography Findings in Dogs and Cats with Hepatic Encephalopathy

Dilara Acetler, DVM

Faculty of Veterinary Medicine, Ankara University, Surgery Department. 06110 Diskapi, Ankara, Turkey

dilara.acetler@gmail.com

Pinar Can, PhD; Eren Uslu, DVM; Dilara Acetler, DVM; Selahattin Ergin, DVM; Omer Besalti, Prof. Dr.

Introduction
Hepatic encephalopathy (HE) is a metabolic disorder of the brain secondary to various hepatic disorders and a cause of reactive seizures. Neurological signs of HE are mainly consistent with forebrain involvement and include alterations in behavior, obtundation that may progress to stupor and coma, continuous pacing, circling, head pressing, hypersalivation (particularly in cats) and seizures. The objective of this study is to present clinical and laboratory findings of HE, and to investigate the effect of electroencephalography (EEG) in diagnostic workup.

Materials and methods
Medical records of clinical signs and EEG studies of 17 dogs and 6 cats diagnosed with presumptive HE were retrospectively reviewed in this study. Data were acquired regarding to signalment, clinical and neurologic examination findings, complete cell blood count and serum biochemistry including plasma ammonia and serum bile acid results. EEG of all cases were qualitatively analyzed.

Results
The most common and prominent clinical sign was obtundation (n=8), lethargy (n=6), head pressing (n=5) and ataxia (n=4) even though the chief complaint was seizure at the admission. The median age at the onset of clinical sign was 58 months with a range between 3 and 216 months. Blood biochemistry results show that all patients had elevated ammonia level besides increased liver enzymes. Most of the dogs (n=12) and cats (n=4) demonstrated triphasic wave and spike-wave complex with paroxysmal activity in interictal period with EEG.

Conclusion
Seizure can be a chief complaint for the cases with HE in addition to other clinical signs. It should be noted that the patient owners may not realize the other neurologic signs except seizures. The results suggest that EEG can be an ancillary diagnostic tool for HE.

References

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