Clinico-epidemiological and Therapeutic Evaluation of Idiopathic Epilepsy in Dogs

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Abstract:

Idiopathic epilepsy (IE) is a common neurological disorder in dogs, characterized by recurrent seizures without identifiable cause. A total of 61 cases (0.28%) of neurological origin were screened out of 21,433 medical cases presented to the university hospital from July 2021 to January 2023, after undertaking a thorough physical and neurological examination. Hemato-biochemistry and radiography was carried out in all the cases. Idiopathic epilepsy was diagnosed in 40.98 % (n=25) of canine cases of neurological origin, on the basis of exclusion criteria. Computed tomography (n=3) and cerebrospinal fluid (CSF) evaluation (n=8) was done as per owners' consent. Hospital prevalence of IE was 0.117 %. The most vulnerable age group was from 6 months to 6 years and the problem was seen more in males (88%) than females (12%), with Spitz (n=6) representing 24% of cases, followed by Labradors (n=5) (20%) and other breeds. Seizure episodes were triggered by excitement, light, sound, and separation anxiety. The pre ictal, ictal and post ictal signs were recorded up to 4 episodes in each dog and the number of dogs with these signs reduced with each episode. Common pre-ictal signs in these dogs were nervousness, attention seeking, whining and hiding whereas the ictal signs were unconsciousness, paddling and shaking of body, rigidity of legs, frothy salivation and urination and defecation. Confusion, disorientation and restlessness were the major post ictal signs exhibited by these dogs after the seizing episode were over. Phenobarbital was used the primary antiepileptic drug @ 3 mg/kg p.o. with prompt intervention as per standard protocol for cases of cluster seizures and status epilepticus. Phenobarbitone was still found quite effective for management of idiopathic epilepsy by reducing both seizing frequency and duration of seizures. All the dogs maintained serum levels of phenobarbitone within the normal therapeutic range evaluated at three and six months interval. Most IE cases (n=18) responded well to the treatment, with the exception of one dog suffering from status epilepticus (SE) and 6 dogs with Cluster seizures, who were managed standard protocol for SE including Diazepam bolus (@ 0.5-1 mg/kg) two times after a gap of 15 minutes followed by Diazepam CRI (1-2 mg/kg/hour) until recovery. In refractory cases, parenteral phenobarbitial was used @ 3 mg/kg bolus. The prognosis for IE was generally favourable, till the therapeutic levels were maintained. Dogs on phenobarbitone therapy showed significant reduction in the ictal period after the treatment and a significant reduction in the seizing frequency at 3 and 6 months interval.

Keywords:

Idiopathic epilepsy, Seizures, Pre-ictal, Ictal, Phenobarbital, Canine neurology.