A single-blinded phenobarbital-controlled trial of levetiracetam as mono-therapy in dogs with newly diagnosed epilepsy - DTU Orbit (09/12/2018)

A single-blinded phenobarbital-controlled trial of levetiracetam as mono-therapy in dogs with newly diagnosed epilepsy

Treatment of canine epilepsy is problematic. Few antiepileptic drugs have proven efficacy in dogs and undesirable adverse effects and pharmacoresistance are not uncommon. Consequently, the need for investigation of alternative treatment options is ongoing. The objective of this study was to investigate the efficacy and tolerability of levetiracetam as mono-therapy in dogs with idiopathic epilepsy. The study used a prospective single-blinded parallel group design. Twelve client-owned dogs were included and were randomised to treatment with levetiracetam (30 mg/kg/day or 60 mg/kg/day divided into three daily dosages) or phenobarbital (4 mg/kg/day divided twice daily). Control visits were at days 30, 60 and then every 3 months for up to 1 year. Two or more seizures within 3 months led to an increase in drug dosage (levetiracetam: 10 mg/kg/day; phenobarbital: 1 mg/kg/day). Five of six levetiracetam treated dogs and one of six phenobarbital treated dogs withdrew from the study within 2-5 months due to insufficient seizure control. In the levetiracetam treated dogs there was no significant difference in the monthly number of seizures before and after treatment, whereas in the phenobarbital treated dogs there were significantly (P = 0.013) fewer seizures after treatment. Five phenobarbital treated dogs were classified as true responders (>= 50% reduction in seizures/month) whereas none of the levetiracetam treated dogs fulfilled this criterion. Adverse effects were reported in both groups but were more frequent in the phenobarbital group. In this study levetiracetam was well tolerated but was not effective at the given doses as mono therapy in dogs with idiopathic epilepsy. (C) 2015 Elsevier Ltd. All rights reserved.