

TO WHOM IT MAY CONCERN

Epilepsy is caused by abnormal electrical events in the brain that result in either loss of consciousness and in tonic/clonic convulsions or in focal motor seizures in which a specific group of muscles undergo uncontrolled intermittent contractions.

Prodromal signs may include behaviour changes, vomiting and excessive salivation prior to the seizure, with postictal signs of blindness depression, disorientation, polyphagia and polydipsia.

There are a number of extracranial as well as intracranial causes to trigger and release the seizures. Affected dogs require a thorough medical and neurological work-up to differentiate between and rule out these multiple causes. This is extremely important as treatment should be addressed to the appropriate cause. There are a number of cases where the exact diagnosis is never made and that type of epilepsy is called idiopathic.

Therapy should be directed to the diagnosis but as these thorough work-ups are rarely done and idiopathic epilepsy the most common diagnosis, treatment has become a routine. Usually barbiturates or pharmaceuticals which are metabolized to barbiturates are used. These drugs have to be utilized on a daily basis and given in doses to act as sedatives. The dose is normally titrated down to the least effective level and to reach a good working steady-state concentration will take 2 - 6 months.

Phenobarbital is the most common drug used for this purpose, either direct or as a metabolite from another pharmaceutical. It has a good sedative effect on the brain cortex and if a correct procedure during the testing of the level is used, it will work tremendously well for a number of dogs. The bad thing with Phenobarbital is that it has a number of effects on other parts of the body. These are nearly all adverse effects such as respiratory depression, decreased myocardial contractility, decreased mean arterial pressure and stroke volume. Administration of barbiturates reduces the sensitivity of the motor-endplate to transmitter substances thereby relaxing skeletal muscles. It causes polyphagia, polydipsia and polyuria. It is metabolized by the liver and liver enzymes are increased in blood samples and Phenobarbital will often, when used during long periods, produce degenerative hepatic hyperlipidosis. Phenobarbital will also interfere with other medications. It will change both metabolism and excretion in a number of other drugs. Phenobarbital serum concentrations will also change with physical and psychological stress thus provoking seizures to appear.

Due to the adverse effects of Phenobarbital on physiological conditions vital for performance as well as changes of resorption and metabolism caused especially by race-stress-diarrhoea it is a drug not suitable in racing dogs. Furthermore, a treated dog harnessed in a team does not have the possibility to adapt to its own ability but might have to accept a workload beyond its capacity. This is not in accordance with the Swedish "Animal Welfare Act" and dogs treated for epilepsy are thus disqualified for racing.

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