

Owner compliance with long-term anticonvulsants prescribed for their epileptic dogs.

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Summary

Compliance is the extent to which clients follow a prescribed course of treatment for their pet. The primary objectives of this study were to describe the degree and variability in the level of compliance of owners whose dogs were prescribed anticonvulsants for epilepsy and to compare methods of assessing compliance. Four methods of assessing compliance were used: pill count, client reported missed doses, electronic medication monitoring and veterinarian prediction. The electronic monitoring measures showed significantly lower compliance rates, indicating that client self-report and pill count overestimate dose-taking compliance assessed by electronic monitoring. Even so, client reported, pill count, and MEMS[®] compliance measures were significantly positively correlated.

Compliance is the extent to which clients follow a prescribed course of treatment for their pet. Poor compliance is a serious problem for physicians, particularly with chronic diseases. There are no published studies of compliance with long-term medications in veterinary medicine. The primary objectives of this study were to describe the degree and variability in the level of compliance of owners whose dogs were prescribed anticonvulsants for epilepsy and to compare methods of assessing compliance. A secondary objective was to assess the relationship between missed doses of medication and the occurrence of seizures.

Four methods of assessing compliance were used: pill count, client reported missed doses, electronic medication monitoring and veterinarian prediction. Electronic medication monitoring was performed using the Medication Event Monitoring System (MEMS[®] TrackCaps[™], APREX, a Division of AARDEX[®] Ltd., Union City, California). Data stored in the caps were downloaded at the end of the study. Eligible cases were identified from controlled drug records of three small animal practices in a Canadian city. Thirty-one owners agreed to participate out of 46 owners contacted. During the three month study follow-up period owners were required to visit their veterinary practice three times. Owners were asked to bring all of their pet's medication containers with them to the study visits for a "medication label review". A pill count was performed and blood samples were taken for serum drug levels while the owner completed a questionnaire. The electronic monitoring device was collected at the end of the study. The attending veterinarian was asked to complete a questionnaire, predict owner compliance, and to assess treatment outcome.

Client participants were given only partial information on the study objectives when they entered the study. The compliance aspect of the study was explained to owners once they turned in their completed questionnaire. This study was approved by the University of Saskatchewan Advisory Committee on Ethics in Behavioral Sciences.

Four of the cases were on phenobarbital and potassium bromide and 87% of cases (27/31) were on twice daily phenobarbital therapy. Small breed dogs (4-16 kg) comprised 74% (23/31) of the cases with only 8 large breed dogs (>20 kg). Owner compliance varied with the method of assessing compliance such that each method resulted in significantly different median compliance rates. The electronic monitoring measures showed significantly lower compliance rates, indicating that client self-report and pill count overestimate dose-taking compliance assessed by electronic monitoring. Even so, client reported, pill count, and MEMS[®] compliance measures were significantly positively correlated. Seizures occurred infrequently during the study follow-up period. Although dogs with non-compliant owners showed a tendency to have seizures, the occurrence of seizures was not significantly associated with non-compliance and serum drug levels were not associated with compliance nor were they associated with the occurrence of seizures.

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