SMALL ANIMALS

Metronidazole-induced neurotoxicity in 26 dogs

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Abstract

Background

Metronidazole is an antibacterial, antiprotozoal and anthelmintic medication commonly used in veterinary medicine. We describe cases of neurotoxicity associated with the drug's administration.

Methods

Medical records between 2004 and 2017 from four veterinary referral hospitals were reviewed. Inclusion criteria were the presence of neurological signs compatible with metronidazole toxicity, clinical history supporting recent metronidazole therapy and resolution of clinical signs upon discontinuation of metronidazole administration.

Results

A total of 26 dogs were identified with clinical signs supporting a diagnosis of metronidazole toxicity. Median age at presentation was 7.2 years (range, 0.1–12 years); median duration of treatment was 35 days (range, 5–180 days); median treatment dosage was 21 mg/kg BID (range, 13–56 mg/kg every 12 h); median resolution of the clinical signs upon discontinuation of metronidazole was 3 days (range, 1–26 days). Magnetic resonance imaging (MRI) of the brain was performed in 19 cases and only one dog had brain lesions affecting the dentate nuclei, which resembled the MRI appearance of this disease in humans.

Conclusions

We found evidence of neurotoxicity in dogs at much lower doses than previously reported and we suggest caution when administering metronidazole at doses > 40 mg/kg every 24 h, regardless of the duration of the treatment.

Supporting Information