

Conversion of Ventricular Tachyarrhythmia by Propafenone and Atenolol Administration in a Dog with High Serum Cardiac Troponin I Concentration

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Signalment: A 5-year-old female Pointer dog weighing 18 kg was presented with vaginal hemorrhage, jaundice, and hyporexia. The dog had a history of parturition 7 days ago, and one of a litter of nine puppies was stillborn. On presentation, the dog showing normal mental status remained in a lateral recumbent position and had a ventromedial nystagmus.

Results: Results of the diagnostic examinations were suggestive of peritonitis resulted from uterine rupture. As the sustained ventricular tachyarrhythmia (VT) which had not been controlled by the lidocaine treatment was visible on the electrocardiogram (ECG), subsequently the emergent hysterectomy was delayed. The results of cardiac ultrasonography were unremarkable. However, the serum cardiac troponin I (cTnI) concentration was very higher. With the administration of propafenone and atenolol, the paradoxical VT was completely disappeared within 48 hours. On day 4 after presentation, the ruptured uterus was successfully removed, and cerebrospinal fluid (CSF) collection and computed tomography (CT) scans of the brain were followed to examine the presence of intracranial lesion associated with her neurological signs. Although remarkable findings were not revealed on the CT scans, the canine distemper virus (CDV) was detected by a nested polymerase chain reaction assay using a CSF sample. The dog was discharged on 5 day after the ovariohysterectomy and is healthy except for abnormal gait.

Clinical relevance: In this case the combination therapy with propafenone and atenolol was effective to manage ventricular tachyarrhythmia. Additionally the elevated serum cTnI concentration, a valuable marker of myocardial damage, may be associated with uterine rupture and/or CDV infection.

Key words: cardiac troponin I, dog, propafenone, [EK1]ventricular tachyarrhythmia