

Permanent transvenous cardiac pacing in a Beagle dog with a third degree heart block

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Cardiac pacemaker is a small, battery-powered device that generates electrical impulses to normalize heart rhythm disturbances and thus is widely used for treating bradyarrhythmias (e.g. high grade heart block, sick sinus syndrome, vagal syncope) and related conditions in human and small animals. A 2.8-year-old intact female Beagle dog (weighing 11 kg) was referred with the primary complaint of exercise intolerance with occasional syncope. Physical examination revealed irregularly irregular heart rhythm with persistent pulse deficits. The 12-lead surface ECG showed a third degree heart rhythm. The dog was diagnosed as a third degree atrioventricular block based on 12-lead ECG and event recordings. No morphological abnormalities were observed in thoracic and echocardiographic examination. A single chambered cardiac pacemaker (V-I-I mode, Kappa KSR903, Medtronic, USA) with bipolar lead was implanted in the right ventricle. After pacemaker implantation, the dog did not show syncopal episode and is able to take a walk with an owner. No side effects associated with permanent pacemaker implantation has been observed to date.

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