Thoracoscopic creation of a pericardial window in dogs

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Abstract

A window in the pericardial sac was created by thoracoscopy in two dogs with diagnosed idiopathic haemorrhagic pericardial effusion (IHPE). Thoracoscopic access to the pericardial sac facilitated surgery and minimised the risk of complications associated with conventional thoracotomy.

Key words: thoracoscopy, pericardial window, dogs

Introduction

In dogs, the accumulation of excess fluid in the pericardial sac may be caused by various factors. The presence of haemorrhagic effusion can be idiopathic (Gibs et al. 1982) or it may occur due to the damage to the cardiac wall resulting from endocardiosis, trauma or neoplasia.

The cause of excess fluid build-up is an important consideration, and it is directly related to the rate of exudate accumulation in the pericardial sac. As a result of damage to the cardiac wall, regardless of its cause, blood is rapidly accumulated in the pericardial cavity, leading to cardiac tamponade. Idiopathic haemorrhagic pericardial effusion (IHPE) takes place less rapidly, and it leads to the development of characteristic symptoms of excess fluid build-up in the pericardial cavity, thus enables surgical intervention.

This manuscript describes the procedure of creating a pericardial window by thoracoscopy with selective intubation in two dogs.

Materials and Methods

A 5 years old German Shepherd Dog and a 4 years old Great Dane diagnosed with idiopathic haemorrhagic pericardial effusion were admitted to the Surgery Clinic of the Faculty of Veterinary Medicine in Olsztyn.

The surgery was performed with the use of standard thoracoscopic equipment. The patients were premedicated with atropine sulphate (Atropinom Sulphuricum, Polfa) (0.05 mg/kg s.c.) and acetopromazine maleate (Calmivet, Vetoquinol) (0.5 mg/kg i.m.). Anaesthesia was induced with a mixture of ketamine (Narkoman, SPOFA) (5 mg/kg) and diazepam (Relanium, Polfa) (5 mg/kg) administered intravenously. The left bronchus was intubated without the use of a cuff seal. To confirm intubation of the correct bronchus, a thin flexible endoscope and an intubation tube inserted simultaneously. The correctness of intubation was also confirmed by auscultation of respiratory murmur on the left side of the thoracic cavity only. Anaes-