

Phonocardiographic and Angiographic Change after Surgical Ligation of Patent Ductus Arteriosus

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Introduction: Patent ductus arteriosus (PDA) is the most common congenital heart defect in dogs, and if not occluded PDA is associated with high morbidity and mortality. There are several diagnostic features for PDA. A continuous murmur is heard at the left heart base on auscultation, and thoracic radiograph show left heart enlargement and dilation of the descending aorta. And characteristic turbulent flow is present in the pulmonary artery on Doppler in echocardiogram. Including these diagnostic methods, phonocardiogram and angiogram were also applied for diagnosis of PDA and assessment of surgical result after the ligation in this case.

Materials and methods: A 2.3kg, five year old, female Maltese was referred to Veterinary Medical Teaching Hospital of Konkuk University for correction of umbilical hernia and anesthetic consideration. Upon clinical examination, the patient was diagnosed as PDA and decided to have surgical correction of PDA with umbilical hernia correction. PDA was identified by angiogram before the surgery and again after surgery, and PDA was ligated using double ligation method. Phonocardiogram was recorded using electronic stethoscope before and after the surgery correction of continuous murmur after surgery was auscultated and changes in heart sound were recorded as phonogram.

Result: PDA was successfully corrected by surgical ligation and the result was assessed right after the surgery through phonocardiogram and angiogram.

Clinical relevance: Phonocardiography and angiography was applied in diagnosis and assessment of surgical result of PDA.

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