Short term effects of ramipril in treatment dogs with stage B2 degenerative mitral valve disease

Prakit Kohkayasit*, Sirilak Surachetpong

Department of Veterinary Medicine, Faculty of Veterinary Science, Chulalongkorn University, Bangkok, Thailand

Background/Aim

Degenerative mitral valve disease (DMVD) is the most common cardiac disease in dogs. Because the pathogenesis of disease is unclear, the goal of therapy is currently to treat the hemodynamic disturbance secondary to valve regurgitation and excessive neurohormonal stimulation. The beneficial effects of angiotensin converting enzyme inhibitors (ACEI) has been proved in DMVD dogs with heart failure. However, the effects of ACEI remains controversial in asymptomatic dogs. The study objective was to evaluate the short term effects of ramipril in asymptomatic DMVD dogs with cardiac structure remodeling (heart failure stage B2 ACVIM classification).

Methods

Twenty three 6 years olds small breed dogs diagnosed with DMVD were included. Dogs were single blinded randomized into 2 groups. The dogs in treatment group and non treatment group were supplemented with ramipril at 0.125 mg/kg per day and without drugs, respectively. The clinical and echocardiographic evaluations were performed at day 0 and day 30.

Results

At day 30, all echocardiographic values (wall thickness, chamber size, fractional shortening, regurgitation fraction) and clinical scores were not significantly different between normal and DMVD dogs. All values were also not significantly different between day 0 and day 30 in both treatment and non treatment groups.

Conclusion

Ramipril has no short term beneficial effects for treating stage B2 DMVD dogs. Since DMVD is a slow progressive disease, studies with a longer period of treatment should be performed to evaluate the long term effects of ramipril in asymptomatic DMVD dogs.

Keywords: angiotensin converting enzyme inhibitors, congestive heart failure, dog, mitral valve disease, ramipril