

# To Support or Not To Support – supplements in dogs with advanced heart failure

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## INTRODUCTION

For a long time, supportive treatments for patients with heart diseases have been in use in different forms. Some commercial products contain L-carnitine, a substance necessary for the normal metabolism of fatty acids and energy production; taurine which plays a crucial role in the physiological functioning of the heart; coenzyme Q10 (ubiquinone) which is important for cardiac energy metabolism; and vitamin E with potent antioxidative properties like coenzyme Q10 or taurine. In dogs with different heart failure stages, it is difficult to compare the efficacy of the substances without resorting to standard management such as diuretics, inodilators, angiotensin-converting enzyme inhibitors (ACE), and antiarrhythmic agents. Therefore, the authors have tried to evaluate how dogs affected with different stages of heart disease feel.

## MATERIALS AND METHODS

The study was carried out with 36 dogs of different breeds, aged from 36 to 222 months, including 10 females and 26 males. The majority of dogs were diagnosed with chronic mitral valve disease (CMVD, 25 dogs) while the others had the diagnosis of dilated cardiomyopathy (DCM, 11 dogs). A transthoracic echocardiographic examination was performed in all dogs. Moreover, a chest X-ray was used to detect left-sided congestive heart failure. The stage of heart failure was determined with widely approved standards and according to the classification of the International Small Animal Cardiac Health Council (ISACHC). Conforming to the classification, dogs with CMVD or DCM were categorised into Class 1 (asymptomatic, n = 9), Class 2 (mild to moderate heart failure, n = 16) or Class 3 (advanced heart failure, n = 11). On the consultation day, the dogs classified as ISACHC Class 2 and 3 received a supplement dedicated to dogs with heart failure to complement the standard management. The supplement's composition includes L-carnitine tartrate 500 mg, taurine 200 mg, Q10 coenzyme 10 mg, and vitamin E 60 IU per tablet (CardioVet, Vet Expert). The product was administered according to the manufacturer's recommendations. After a month, during the follow-up visit, the owners were asked to describe their observations on the well-being and comfort of the dog, focusing on exercise tolerance during walks, respiratory symptoms (tachypnoea), and cough.

## RESULTS

Among nine dogs classified as ISACHC Class 1, the owners of three patients reported improved exercise tolerance, describing their dogs as being livelier with the supplementation compared to the period before the management with the supplement (33.3% of ISACHC Class 1 dogs, 8.3% of all investigated dogs). According to the owners, exercise tolerance improved in 12 of 16 ISACHC Class 2 dogs; the owners described their dogs as livelier (75% of ISACHC Class 2 dogs, 33.3% of all investigated dogs). The group included eight dogs with CMVD and four dogs with DCM. In the case of 11 dogs with advanced heart failure categorised into ISACHC Class 3, exercise tolerance improved in nine dogs (81.8% of ISACHC Class 3 dogs, 25% of all investigated dogs), and it translated into two out of three dogs with DCM and seven out of eight dogs with CMVD. Coughing frequency decreased in two dogs, including one with CMVD and one with DCM (18.2% of ISACHC Class 3 dogs, 5.6% of all investigated dogs).

## SUMMARY

The study demonstrated a favourable effect of the investigated product on the animals with advanced heart failure. The study product contributed to the improvement of exercise tolerance in most dogs, although the evaluation of exercise tolerance was based on the subjective assessments made by the owners. They did not observe any adverse effects of the product. The tablets were well tolerated, with no adverse events. The size of the tablets happened to be an occasional issue. In small breeds, it is necessary to crush the tablet and administer it mixed with food or water. The discussed study gives evidence of good tolerance and efficacy of CardioVet, a combination product, in dogs with advanced heart failure.

### References:

Garncarz M., Parzeniecka-Jaworska M. (2015) Wspomagać czy nie wspomagać – suplementy u psów z ciężką chorobą serca. Magazyn Weterynaryjny, 9, 637-643

