

## To support or not to support – supplements in dogs with advanced heart failure

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### INTRODUCTION

Supplementary therapy for patients with heart diseases has been in use for a long time in different forms. Some of the products available commercially include L-carnitine, a substance necessary for correct metabolism of fatty acids and energy production; taurine that plays a crucial role in normal function of the heart; Q10 coenzyme (ubiquinone), important in energy metabolism of the heart; and vitamin E that – just like Q 10 coenzyme or taurine – has got a strong antioxidative properties. In dogs with different stages of heart insufficiency it is difficult to compare the effect of action of these substances themselves without resorting to standard therapy, that is diuretics, inodilators, inhibitors of angiotensin converting enzymes, and antiarrhythmic drugs. Therefore the authors attempted at evaluating how dogs with heart diseases of different stages feel.

### MATERIALS AND METHODS

The study was performed on 36 dogs of different breeds, aged from 36 to 222 months, 10 females, 26 males. Majority of dogs were diagnosed with chronic mitral valve disease (CMVD, 25 dogs), while others with dilated cardiomyopathy (DCM, 11 dogs). All dogs had transthoracic echocardiographic test performed. Moreover, x-ray was performed to evaluate the presence of left sided congestive heart failure. The stage of heart insufficiency was determined based on accepted standards, following classification of International Small Animal Cardiac Health Council (ISACHC). According to this classification, dogs with CMVD or DCM were qualified as class 1 (asymptomatic, n = 9), class 2 (mild to moderate heart failure, n = 16) or class 3 (advanced heart failure, n = 11). On the day of the visit, dogs classified as ISACHC 2 and 3 received a supplement for dogs with heart failure to complement standard therapy. The composition of the supplement includes: L-Carnitine tartrate 500 mg, taurine 200 mg, Q10 coenzyme 10 mg and vitamin E 60 IU/pill (CardioVet, VetExpert). The product was administered according to producer's recommendations. After a month, during the follow-up visit, the owners were asked to describe their observations about how the dogs felt, focusing on their effort tolerance during walks, respiratory symptoms (tachypnoea) and coughing.

### RESULTS

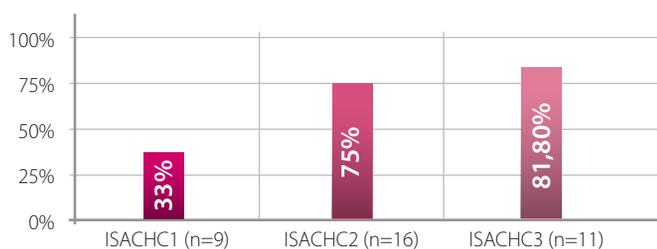
Out of nine dogs classified as ISACHC 1, owners of three patients observed improved fitness, describing their dogs as being more lively after administration of the supplement, as compared to the period prior to administration (33.3% of ISACHC 1 dogs, 8.3% of all studied dogs). According to the owners, in 12 out of 16 ISACHC 2 dogs effort tolerance improved – the owners described their dogs as more lively (75% of ISACHC 2 dogs, 33.3% of all studied dogs). This group included eight dogs with CMVD and four dogs with DCM. As regards 11 dogs with the advanced heart failure, namely ISACHC class 3, in nine patients effort tolerance improved (81.8% of ISACHC 3 dogs, 25% of all studied dogs). This group included two out of three dogs with DCM and 7 out of 8 dogs with CMVD. In two dogs (one with CMVD, one with DCM) cough frequency decreased (18.2% of ISACHC 3 dogs, 5.6% of all studied dogs).

### SUMMARY

**The study showed favourable effect of the analysed product on sick animals with advanced heart failure. The studied product led to improved effort tolerance in majority of dogs, although the evaluation of the effort tolerance was based on subjective impressions of the owners. The owners did not observe adverse effects of the product. The pills were well tolerated, with no adverse effects. Only rarely the problem was the size of the pill. In small breeds it is necessary to crush the pill and administer it mixed with food or water. This study shows good tolerance and effects of the complex product - CardioVet, particularly in dogs with advanced heart failure.**



Improvement in exercise intolerance in dogs with different ISACHC stage of heart failure treated with CardioVet



Percentage of dogs in different ISACHC stages of heart failure in which treatment with CardioVet for 1 month period resulted in improvement of exercise intolerance. The study has been conducted on n=36 dogs out of which in n=26 (72%) the improvement of exercise intolerance has been noted. What is of interest the more profound clinical stage of heart failure the more clearly visible is the positive action of CardioVet in dogs with heart failure.

**CardioVet reduces exercise intolerance in dogs with heart failure.**

### References

Garncarz M., Parzeniecka-Jaworska M. (2015) CardioVet reduces exercise intolerance in dogs with heart failure. *Magazyn Weterynaryjny*, 9, 637-643