Forecast of Patent Application/ANP Lowering Drug Treatment/Preventive Drug Pinfenon-S®

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Introduction

Common internal medical treatment for mitral regurgitation in dogs is ACEI and pimobendane. However, some severe cases may not be responsive to the medical treatment, and limits of internal treatment may be reached. A natural plant component in Pycnogenol is known to have high antioxidant results and effect in dilating the peripheral vessels with many articles reporting its usefulness. Pinfenon-S is a veterinary supplement containing Pycnogenol and fermented sesame seeds. In this clinical study, Pinfenon-S was used in combination with commonly used cardiac medicine for the investigation of efficacy.

Materials and Method

The clinical study was conducted in 27 dogs with mitral regurgitation at 15 hospitals across Japan with animals with left atrial volume load included in the study. These animals had administrated Pinfenon-S for 30 days while continuing the treatment with the currently used cardiac medicine. The treatment regimen of the cardiac drugs remained unchanged during the study. An evaluation was conducted by general physical examination and blood tests (CBC, 16 biochemistry items, and hANP), which were performed at the start of the study and after 30 days. The owners were asked to measure the respiratory rate during sleep and to observe the changes in cough and the behavior during a walk.

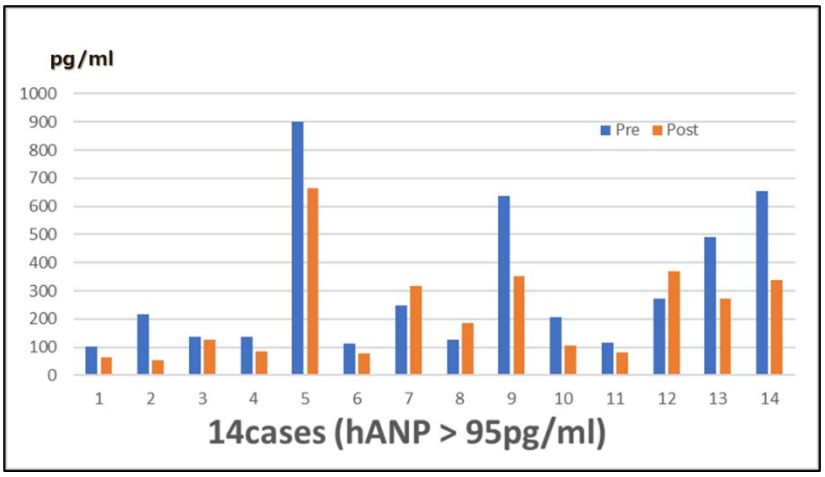

Figure 1. hANP Values Before and After Administration of Pinfenon-S in 14 Animals with Left Atrial Volume Load ($p < 0.05$). A significant decrease in the hANP value was observed after administration compared to before ($p < 0.05$).

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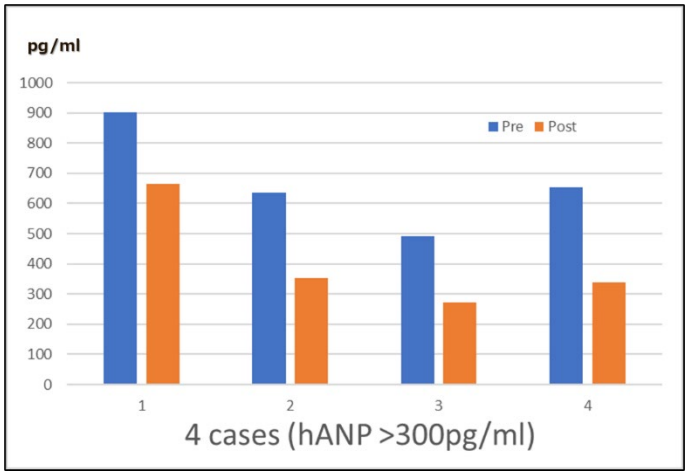

Figure 2. hANP Values Before and After Administration of Pinfenon-S in Four Animals with High hANP Values ($p < 0.01$). A significant decrease in the hANP value was observed after administration compared to before ($p < 0.01$).

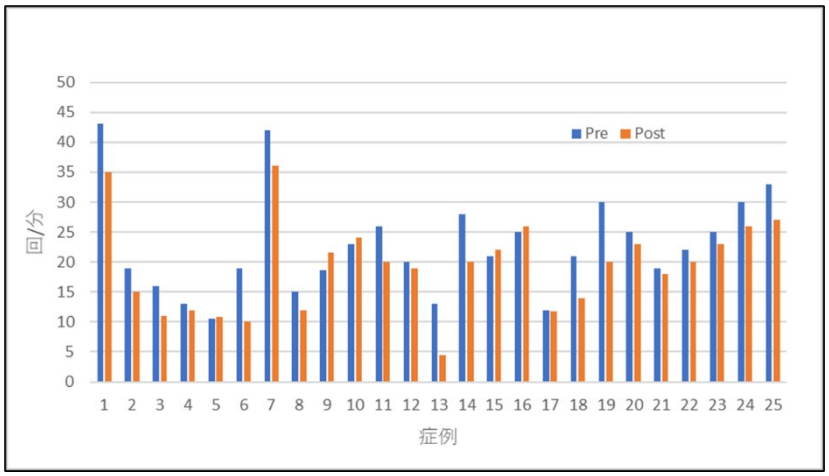

Figure 3. Changes in Respiratory Rate Before and After Administration of Pinfenon-S. A significant decrease in the respiratory rate was observed after administration compared to before ($p < 0.01$)

Results

Of the 27 dogs with mitral regurgitation, 14 dogs who were considered to have left atrial volume load showed a significant decrease in the hANP value ($p < 0.05$) (Figure 1). In particular, four animals in the high hANP value group (> 300 pg/mL) presented a greater significant difference ($p < 0.01$) (Figure 2). In addition, a significant decrease was observed in the respiratory rate during sleep after administration compared to before ($p < 0.01$) (Figure 3). No significant adverse events were observed in this study.

Discussion

Observation of a significant decrease in hANP suggested that Pinfenon-S is effective in reducing the left atrial volume load in patients with mitral regurgitation through the effect of the dilation of peripheral blood vessels. The results of this study suggested the efficacy of this treatment in animals who have reached the limit of internal treatment. We would like collect data on the further potential of Pinfenon-S through studies on additional subjects going forward.