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Effectiveness of a feed supplement to control hyperphosphatemia and metabolic acidosis in advanced stages of feline Chronic Kidney Disease (CKD)

Introduction & Aim: When diet alone is not sufficient it is necessary to supplement the diet of CKD cats with specific substances. These are phosphate binders and alkalinizing agents. The aim of this study was to evaluate the effectiveness of a feed supplement containing a mix of substances to bind the phosphate and correct the metabolic acidosis in cats with CKD (IRIS, International Renal Interest Society, stage 3 and 4).

Material & Methods: 10 cats (median BW 4 (3, 6) Kg, BCS 3/5(2, 4), 11 (9, 12) years) fed with a balanced renal diet were involved in the study. Treatment consisted in oral administration of the product (Renal, Candioli Pharma) containing calcium carbonate, calcium lactate gluconate, sodium bicarbonate and chitosan given for 60 days. The animals were evaluated at the beginning of the study and at 15, 30, 60 days (T0, T15, T30, T60) for: BW, BCS, food intake, blood pressure and for routinely hematochemical, biochemical and urinary parameters. All statistical analyses were performed using SAS software. After checking normality data were analyzed using Kruskal-Wallis and Wilcoxon tests. Results are expressed as median (interquartile range). Letters show differences among rows ($P < 0.05$).

Results & Discussion: Statistically significant reduction of serum phosphorus concentration was obtained through the study (reduction of 59% at T60 vs. T0). Also a statistically significant increase of bicarbonate was seen (7% from T0 to T60). At T60 was also recorded an increase of ionized calcium level, which however was in normal range. It was also detected a statistically significant difference for the albumin/globulin ratio between day 15 and day 60.

Conclusion: Even if many studies on phosphate binders are conducted on healthy animals it is important to evaluate their efficacy also in cats with CKD. In fact the addition of a phosphorus binder may reduce food intake in azotemic cats but that effect was not seen in the present study. The feed supplement was effective to reduce blood phosphate levels and to increase blood bicarbonate levels thus improving cats' clinical conditions for the duration of the study.

Biography

Nataschia Bruni has completed her PhD from University of Turin and Postdoctoral studies from high synthesis school of Gargnano, Italy. She is the Director of Research and Development in Candioli Pharma. She has published more than 10 papers in reputed journals.

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