

CHRONIC KIDNEY DISEASE IN DOGS: TOLERABILITY AND EFFICACY OF A NUTRITIONAL SUPPLEMENT

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Chronic kidney disease (CKD) is a very common disorder in elderly dogs (1). Administration of a renal diet is considered the therapeutic target to improve survival and life quality of canine patients with IRIS stages 3 and 4 (2). However, when diet alone is not sufficient for slowing down CKD, dietary supplementation with other substances (ie, phosphorus chelates and alkalizing agents) is required (2). The present study aims to evaluate the efficacy and palatability of a dietary supplementation containing calcium carbonate, calcium-lactate gluconate, chitosan and sodium bicarbonate in dogs with IRIS stage 3 of CKD.

20 dogs (mean age 10.4±2.3) were considered. All animals belonged to IRIS stage 3 of CKD since at least one month and had hyperphosphatemia despite assuming a balanced renal diet. 10 dogs (T group) were administered the dietary supplementation at 0.2g/kg/die for 6 months along with the renal diet (composition: 23% CP; 17% C Fat; 4.7% C Fiber; 0.6% Ca; 0.3% P). 10 animals, whose owners did not give consent for any supplemental therapies apart from the renal diet (the same as T group), were recovered from the clinical database and served as control (C) group. Haematochemical, biochemical and urine analyses were performed on 0, 15, 30, 60, 90, 120, 150 and 180 days. GraphPad Prism® software was used to perform statistical analysis. Data were analyzed by one-way ANOVA, Kruskal-Wallis, Student t and Mann-Whitney U tests (p<0.05).

Serum P at days 30, 60, 90, 120, 150 and 180 was lower (p<0.01) in T group than C. Alterations of Ca-P homeostasis and hyperphosphatemia negatively affect renal functioning and survival rates in dogs with CKD (4). Serum iCa at days 120, 150 and 180 was higher (p<0.01) in T group compared with C one.