

Antibiotic-associated gastrointestinal signs in healthy cats administered clindamycin with or without a synbiotic (Provable-DC®)

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The objective of this study was to assess antibiotic-associated gastrointestinal (GI) signs in healthy cats administered clindamycin with or without a synbiotic (Provable-DC®) for 21 days.

A randomized, double-blinded, placebo-controlled cross-over was performed using 16 healthy research cats. After a 1-week baseline period, cats received 75 mg clindamycin once daily with food, followed 1 hour later by 2 capsules of either the synbiotic or a placebo, for 3 weeks. After a 6-week washout period, the groups were switched. Successful completion of initial treatment group was evaluated using a one-way repeated measures ANOVA due to significant period effects, while a cross-over ANOVA with repeated measures was used to compare food intake, percent days vomiting, and mean fecal scores (1-7, formed to liquid). $P < 0.05$ was considered significant.

Cats receiving the synbiotic were more likely to complete treatment in period 1 (100% vs 50%, $P = 0.04$), due to decreased vomiting. Cats vomited less overall when receiving synbiotic, but this was not significant due to period effects ($F = 11.4$, $P < 0.01$). Cats had higher food intake while receiving synbiotic ($F = 31.1$, $P < 0.01$), in spite of period effects ($F = 8.6$, $P < 0.01$). There was no significant effect of treatment on fecal scores, with scores increasing over time in both groups ($F = 18.0$, $P < 0.01$).

Administration of a synbiotic 1 hour after clindamycin administration decreases hyporexia and severe vomiting in healthy cats. Additionally, significant period effects indicate clinical benefits of synbiotic administration persisted longer than 6 weeks after discontinuation, decreasing the severity of antibiotic-associated GI signs in cats that subsequently received clindamycin with placebo.

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