



Audio Summaries: In canine acute diarrhoea with no identifiable cause, does daily oral probiotic improve the clinical outcomes?

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Hi, my name is Jacqueline Tong, a vet student from the University of Edinburgh. My Knowledge Summary talks about; what are the use of probiotic could bring clinical benefits in dogs with acute diarrhoea, but no identifiable courses.

The reason why I reached to look into this topic is that I often see owners concerned about the use of probiotics in the Facebook group.

Five placebo-controlled trials suggested a daily oral probiotic supplement provides better clinical outcomes to the dog, to have acute diarrhoea without an identifiable course. The participating dogs were all recruited from clinics, which support the applicability of these studies. Significant findings were reported for various outcome measures, including the times of diarrhoea resolution, improvements in diarrhoea severity, changes in the microbiota and the percentage of dogs that require additional treatment. three studies presented for shorter time to diarrhoea resolution in the probiotic group ranging from 15 hours to 2.7 days.

One reported greater improvement in stool consistency score in the probiotic group, two studies presented a reduction of faecal *Clostridium perfringens* with probiotic. And lastly, two studies showed a lower percentage of dogs in the probiotic group receive additional treatments than the placebo group. Even though all the studies supported the use of probiotic in helping dogs with acute diarrhoea with no identifiable courses, the strength of some evidence is limited. For example, in some studies, the baseline variation between the probiotic group and the placebo group was not evaluated. The number of patients completed in the studies mismatch with the number of them included in the analysis without explanation, no statistical analysis was conducted is one study as well. On the other hand, there is uncertainty around the clinical relevance of the studies to some of the outcomes. For instance, the faecal consistency score improves in the probiotic group compared to the placebo group.

But the difference between them is in a small degree, less than 0.5, the clinical relevance is the questionable. Like whether the clinical impact is not possible in daily practice and the association between the reduction if ego *Clostridium perfringens* and the improvement in diarrhoea severity was still controversial. Given that one study reported and association between increased custard in proficiency, in faces and acute diarrhoea. While another one was unable to find the association. Additional studies will be beneficial to validate the better clinical outcomes brought by probiotic supplement. But the results from these studies are so far encouraging.

One study provides quite strong evidence that there is a reduced requirement of additional treatment like antibiotic in dogs administer a daily probiotic. The studies included a large sample size and a signalment between probiotic and placebo group was comparable. It is worth noting that the

probiotic agents, dose, dosing interval, the method of feeding, diet and the duration of treatment in these studies are all varied conditions and owners need to be aware that this variation can lead to different clinical outcomes. And thank you very much for listening.

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