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Are probiotics and related strategies useful as alternative treatment to antibiotics in chronic enteropathy in dogs?

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Chronic enteropathy (CE) or inflammatory bowel disease (IBD) is a common spontaneously occurring idiopathic inflammatory diseases of the gastrointestinal tract in pet dogs. The routine treatment involves dietary modification, antimicrobials (usually tylosin or metronidazole) and immunosuppressive dosages of glucocorticoids. However, there is increasing concern about the long-term use of antimicrobials in this context, and alternative treatment options have been sought. In addition, a number of dogs will not respond well to the traditional treatments mentioned above. Alternative ways to modify the microbiota, which are heavily implicated as one of the drivers of intestinal inflammation (usually in a genetically predisposed host, even though not a lot about genetic risk is known in dogs), that can be considered for these cases include the administration of probiotics or faecal microbiota transplantation (FMT). The most commonly used probiotic in small animals is *Enterococcus faecium*; however, so far there is not much evidence to suggest it as beneficial in canine CE or IBD cases, as it has a rather pro-inflammatory profile in ex-vivo studies and whole blood assays and did not lead to a significant clinical improvement compared to placebo in dogs with food-responsive CE in a clinical trial. Other commercially available products like mixtures of several probiotic strains (e.g. VSL#3®) are more promising, as there is some evidence that

they can be clinically effective as a combination of metronidazole and prednisolone, and functionally can lead to an increase of regulatory T cells within the intestinal mucosa in dogs with IBD. Even though there is an increasing understanding of the canine intestinal and faecal microbiota composition, characteristics and function, there is only anecdotal evidence to support FMT in CE or IBD. Some preliminary data on its clinical success will be presented.

Biography

Silke Salavati has graduated as a veterinarian from the Justus-Liebig University in Giessen, Germany. She has done a doctoral thesis on the topic of gastric emptying assessment in dogs, followed by a Residency in Small Animal Internal Medicine (Diploma at ECVIM-CA). She also completed her PhD at the Royal Veterinary College (London, UK) on the effect of probiotics in canine inflammatory bowel disease. She has worked as a Junior Lecturer in Giessen, and is Senior lecturer in Small Animal Internal Medicine at the University of Edinburgh since 2016. She has around 50% clinical duties and otherwise performs clinical and non-clinical research related to Canine Gastroenterology. She has published around 25 papers on topics related to Canine Gastroenterology and authored or co-authored several chapters in Small Animal Internal Medicine/Gastroenterology books.

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