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You said “gastro-intestinal” food? Approach of pet food diversity during a student conducted consultation

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Introduction. The choice of a Pet Food adapted to a clinical case is often difficult to perform by veterinary students. Indeed, between marketing, labelling, clinical data and the wide choice among available products, it is easy to be lost and to base their prescriptions on cognitive bias instead of scientific data. This presentation reports a case of protein-losing enteropathy with intestinal lymphangiectasia and its dietary management. Beyond the clinical aspect the authors want to discuss about educational aspect.

Case history. A nine years old, neutered, Polish lowland sheepdog male was presented at the nutrition department of veterinary school of Lyon in December 2018. From September 2017 to June 2018, he had diarrhoea and lost 4kg, from around 24kg to 20.1 kg (BCS: 3/9). In June 2018, a protein-losing enteropathy with intestinal lymphangiectasia was diagnosed by histology analysis of intestinal biopsies. At the same time, its usual veterinarian prescribed specific-purpose kibbles for gastrointestinal disorders (n°4 in figure 1) in complement to prednisolone prescription (1mg/kg BW). In spite of prednisolone and “gastro-intestinal” kibbles, diarrhoea diminished only slightly (Stool frequency: 4-5/day, consistency score: 4/5) and the panhypoproteinemia was still present. A 2mg/kg BW dose of prednisolone was not tolerated by the dog.

Consultation. The consultation was performed by a student in the 4th year of the curriculum. As a part of case history was available before the consultation, a briefing based on literature was done before the consultation [1]. The aim of this briefing was to give the necessary knowledge to students to perform the clinical reflexion, and thus to allow him to conduct the consultation as far as possible. He took the history and realized the physical examination under supervision of a professor. The calorie intake was 1357 Kcal of metabolizable energy (ME) per day provided by 350g of kibble (n°4) which was close to the MER of 1257 Kcal ME/d (MER=130xBW^{0.75}/d). Protein intake: 12.3 g/kg BW^{0.75} and fat intake: 7.9g/kg BW^{0.75}. To help the student in the case assessment, he had a nutrition software and diagrams for available food for each intended use (tools are presented in this congress [2]). Figure 1 presents one of these diagrams, the given food being number 4. According to this diagram and the briefing presenting the interest of fat reduction in management of protein-losing enteropathy with intestinal lymphangiectasia, the student easily assessed that this food was not the most appropriate for this case. With help of other diagrams, he proposed to change food for the number 9 (Hill's i/d low fat). Daily intakes provided by the new food were initially: calorie: 1272 Kcal ME, protein 8.5g/kg BW^{0.75} and fat 2.8g/kg BW^{0.75}. Three days after the food change, diarrhoea stopped (and one month later, prednisolone dose was successfully decreased to 0.5 mg/kg BW and the calorie intake was progressively increased to 1450 Kcal ME in order to recover its optimal body weight.

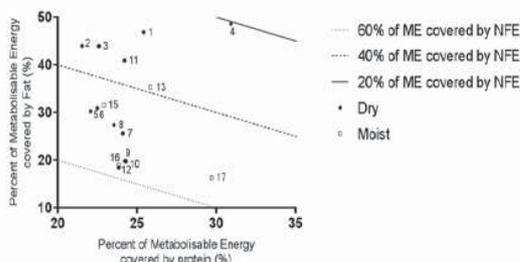


Figure 1. Diagram presenting metabolisable energy origin of Pet Food with “gastrointestinal disorder” intended use.

Conclusion. More than clinical success, we report an approach that may popularize clinical nutrition reflexion among veterinarians by making it achievable.

References: [1] Okanishi et al. (2014) J.Vet. Intern. Med. 28: 809-817. [2] Alves de Oliveira et al. Reflexion and proposition of a tool for teaching small animal nutrition in veterinary cursus.