adverse food reactions

various commercial foods available that are promoted as “limited antigen” or “hypoallergenic.” These are generally based on the same principles as the home-prepared diets and have a minimal number of novel ingredients. The foods are promoted for both diagnosis and long-term AFR management.

However, given that they are likely produced alongside a company’s general line of pet foods using many of the same core ingredients such as the fats, fibers, non-nutritive additives, vitamins, and minerals, there might be valid concerns that this could limit their efficacy.

The success of commercial limited-antigen derm diets has been reported to be less than 50% for dogs fed chicken and rice, catfish and rice, venison and rice (Leistra et al., 2001), fish and potato (Tapp et al., 2002; Glos et al., 2002) or salmon and rice diets (Glos et al., 2002) and for cats fed lamb and rice or chicken and rice diets (Leistra and Willemse, 2002).

However, success for all diets is not necessary; success on at least one is. For example, Leistra et al. (2001) reported that 95% of the dogs in their study resolved AFRs with at least one of the three commercial limited-antigen diet choices.

Hydrolyzed proteins are another ingredient option. The theory behind them is that enzymatic hydrolysis reduces the size of the dietary protein to such a level (peptides or less) that the offending antigen goes undetected — flying below the radar, so to speak. In single-ingredient provocation studies, even animals sensitized to a particular ingredient like soy or corn were effectively fed a hydrolysate of the same ingredient without reacting negatively (Puigdemont et al., 2006; Olivry et al., 2007).

So, the concept is sound, but what matters is the complete pet food. In this final form, the results are mostly positive. Diets based on hydrolyzed chicken were reported to be effective at diagnosing dogs with an AFR (Loeffler et al., 2006). For hydrolyzed soy diets, results on one study were positive (Borge et al., 2004) and on another provided no resolution (Glos et al., 2008) for dogs with an AFR.

For these hydrolyzed proteins to work, hydrolysis has to be just right — enough, but not too much. The inconsistent results could be due to varying degrees of protein hydrolysis. There is pressure not to overhydrolyze the proteins because it can lead to bitterness and palatability issues and alter the osmotic balance in the gastrointestinal tract, leading to softer stools (Cave, 2006).

These ingredients are expensive, and the consistency of the protein hydrolysis is vital to the success of the food.

In the end, the solution to AFRs may be a simple dietary choice. Preparing food at home or selecting from any one of a number of commercial limited-antigen or hydrolyzed protein diets will usually prove effective.

Research in this area continues to shed light on the exact mechanism underlying the cause of AFRs. There will likely be some breakthroughs in the next decade, but until then, it is a process of elimination to find just the right diet for the pet suffering from an AFR.

References


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