

DIET AT YOUNG AGE AND CANINE ATOPY/ALLERGY (TYPE) DISEASE

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Introduction

Atopy/allergy derived dermatological problems are common problems in canine medicine today and hard to diagnose correctly. The etiology is unknown but several theories are proposed; e.g. "abnormal immunity due to too good hygiene" or non-physiological diet, deranged microbiota, abnormal absorption, or lack of key nutrients in the food. As symptoms often are helped by changing the diet to raw food, we hypothesized that raw food intake at a young age might decrease the incidence of atopy/allergy in dogs.

Materials and methods

An early data (n=3475) of the DOGRISK owner questionnaire was used for this study (www.ruokintakysely.fi). It includes questions about the dog's descriptives, diseases, environmental factors and nutrition at different life stages. The dogs suffering from atopy/allergy were chosen as the case group (n=150) whereas a double amount of healthy dogs were chosen as a control group (n=300). Associations between diseases and 54 food items served at ages 2-6 months as well as >6-18 months were analyzed using cross-tabulation and Pearson Chi-square test.

Results

The sample (n=450) was not significantly different from the whole data (n=3475), except for having more neutered dogs and less families where the dog was the only dog. The diet at 2-6 months of age showed a significant association between the following raw food items and being free from atopy/allergy: raw diets, -offal, -meat, -bone, -cartilage, -tripe, -fish, -egg, -vegetables, -berries, and drinking from outdoor puddles ($p < 0.001-0.013$) whereas dry dog food and skin chewing bones significantly associated with an increase in atopy/allergy ($p = 0.004-0.033$). There were no other significant associations between food items and atopy/allergy (Table 1).

Significantly more males, white coated animals, dogs with mothers that suffered from atopy/allergy and dogs that had spent less time outside, also suffered from the disease. However, in logistic regression models raw meat stayed as a significant item that decreased atopy/allergy.

FOOD EATEN AT 2 - 6 MONTHS (n=450)		
	r_s	P-value
Raw offal	-0.19	0.000*
Raw meat	-0.22	0.000*
Raw egg	-0.19	0.000*
Raw vegetables	-0.21	0.000*
Raw fish	-0.17	0.001*
Water from puddles	-0.11	0.006*
Raw bone and cartilage	-0.14	0.007*
Raw berries	-0.15	0.007*
Raw tripe	-0.14	0.013*
Commercial dry food	0.16	0.003*
Commercial hide "bones"	0.06	0.033*

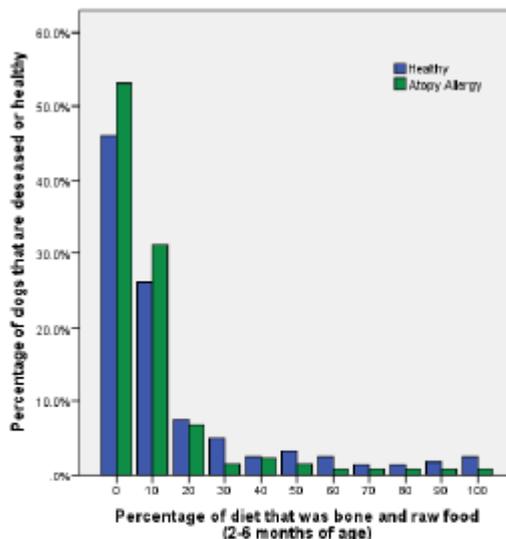


Table 1. Significant (*) associations between food items and CAD, r_s = Spearman's correlation coefficient where a negative correlation (green text) decrease disease whereas a positive correlation (red) increase disease.

Fig. 3: On the X-axis is the % of the diet that was BARF and on Y-axis the percentage of dogs that were either healthy or suffered from atopy/allergy per BARF group.

Conclusions

This study proposes a decrease in the incidence of atopy/allergy type of disease in dogs that eat raw animal proteins. More complex analyses should be performed, looking for more confounding variables. If the results still stand, clinical studies should be performed to verify these results.

Discussion

It seems that bone and raw food (BARF) at a young age has a positive influence on atopy/allergy incidence in dogs. Already when 20 % (1/5) of the diet is BARF, there starts to be more healthy dogs per group (Fig. 3). In this study both raw proteins and raw vegetables and berries were saving the dog from atopy/allergy type of disease whereas typical commercial dry products seemed to increase the risk for this disease. In the logistic model of suffering from this diseases or not, eating raw meat as well as raw bone and cartilage gave the strongest association of the food items.

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