

A PILOT STUDY TO EXPLORE THE EFFECTS OF ACTIVE ENZYMES ON THE ORAL HEALTH OF CATS AND DOGS

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Summary

This pilot study involved 13 cats and 2 dogs. The animals involved were all suffering from a degree of periodontal disease which required treatment. One of the cats involved had gingivitis/stomatitis complex. All the animals which were provided with the active enzyme supplement showed significant improvements in their oral health compared with the unsupplemented control group. The most notable was the dramatic improvement in the cat with gingivitis/stomatitis complex. As a result of these very encouraging findings, the study will be continued to assess a larger sample of animals over a longer period.

Introduction

The modern diet of domesticated dogs and cats is very different from that of their wild counterparts. Cats have evolved as carnivores and in their wild state will catch and kill their own prey, eating the meat, bones, intestinal tract and offal. Dogs are more omnivorous and, by nature, scavengers, but much of their natural diet is also raw, like that of the cat. There have been several studies showing improvements in oral health following a change from a processed food diet to a raw food diet in both dogs and cats. One of the major differences between these two diets is their enzymatic activity. As processed foods are produced at high temperatures, any active enzymes which may have been present in the original raw ingredients are destroyed.

This study explores the effects of adding a concentrated multiple micronutrient and active enzyme supplement (Pet Plus+ for Dogs™ or Pet Plus+ for Cats™) to processed food diets on the oral health of dogs and cats.

Materials and Methods

All cats and dogs were examined while under general anaesthesia, induced by Rapinivet and maintained by Halothane, nitrous oxide and oxygen. Photographs were taken and the degree of gingivitis assessed using the following gingivitis index:

- I mild with no bleeding on probing
- II moderate with no bleeding on probing
- III severe with bleeding on probing
- IV severe with swelling or ulceration and spontaneous bleeding.

A thorough prophylaxis was performed with the details recorded on a dental chart. Further photographs were taken. All animals were discharged on 5 days of Synulox. The supplemented group commenced the daily enzyme supplement immediately upon discharge.

Post-operatively, all animals were re-assessed on days 5, 14, 21 and 28, updating the dental records. Photographs were taken at 28 day intervals in most cases. Home-care was specifically not implemented in order to minimize the variables.

Results

The results are very interesting, with the improvements gained being maintained throughout the period of supplementation. Most of these animals have remained on the supplement and are planning to continue for life.

- (a) Gingivitis in all supplemented animals improved and in some cases resolved. These changes were evident 5 days post-operatively and continued after withdrawal of antibiotic therapy.
- (b) Gingivitis in the unsupplemented animals improved in most cases up to day 14, but with no home care and only a processed proprietary diet, the gingivitis had started to worsen by day 21; one cat had reverted to its original grade III gingivitis.
- (c) Two unsupplemented cats showed no significant improvement by day 5 so further antibiotic therapy was implemented. This was continued up to day 21. Unfortunately one of these cats was withdrawn from the trial, but the other, after no improvement on 3 weeks of Synulox and an 8-day long-acting corticosteroid injection, joined the supplemented group, where his condition has greatly improved.
- (d) The cat with gingivitis-stomatitis complex was in the supplemented group. At the start of the trial, the gingivitis was classified as grade IV with spontaneous bleeding of the gingival tissue. Pharyngeal ulceration was also present. Improvement to grade III gingivitis was noted by day 5 and by day 28 the examination and repeat photographs showed a grade I gingivitis with resolution of approximately half the area of pharyngeal ulceration.

Discussion

The preliminary findings of this study suggest that the micronutrient and enzyme activity of the food plays a significant role in the state of oral health. Recent research in the human field (I.L.C. Chapple et al) has shown that serum antioxidant levels are directly related to periodontal health. In addition, the other exposed epithelial surfaces (e.g. cervix and lungs) are affected in the same way. This emphasizes the importance of a thorough oral examination at every consultation as the state of oral health reflects the degree of health of the whole body. If oral health is poor, a natural whole food supplement is required to redress the balance of micronutrients which will provide the body with the ingredients it needs to effect repair and maintain health.

Pet Plus, the natural whole food nutritional supplement used in this study contains active enzymes, antioxidants, vitamins, minerals, probiotics and prebiotics from dehydrated, concentrated raw food. It is having a positive impact on the overall health of dogs and cats all over the world.

It has long been realised that micronutrients (especially live, active enzymes) play an important role in the proper functioning of all living things. Only recently have we begun to understand that unless these are present in the diet, body systems begin to fail. This results in degenerative diseases, especially cancer and heart disease, which are becoming increasingly common in the human and domestic animal populations of the developed world.

Why are active micronutrients so important?

- (1) Free radical pathology is now largely accepted as a major cause of degenerative disease. It is estimated that every cell is exposed to free radical attack 10,000 times

a day. Antioxidants offer the major protection against these molecules. Free radicals are unbalanced molecules which need an electron to regain their neutral balanced status. If this electron is taken from a cell, the cell is damaged, which is the beginning of free radical pathology. The antioxidants work synergistically to provide the necessary electron to neutralize the free radical, thus protecting the cells. That antioxidant is now short of an electron and effectively behaves like a free radical. It needs to be repaired by other antioxidants, phytonutrients and enzymes found in whole food sources but missing from isolated vitamin/mineral supplements. This natural antioxidant recycling cascade cannot work effectively when vitamins are given in isolation or in large amounts (e.g. 1000mg vitamin C), because the damaged antioxidant is left unrepaired doing as much damage as the original free radical. There are now known to be over 15,000 micronutrients in whole raw food all of which are required to maintain the fine natural synergistic balance of health.

- (2) Enzymes are essential catalysts for all metabolic processes. Without enzymes, there would be no metabolic processes and hence no life. These are only available from a whole raw food source as it is essential to have all the enzymes together so they can work synergistically in an efficient natural balance.

Micronutrients are used up during the process of living. They constantly need to be replaced. The only source is raw food. Without an adequate supply, the body gradually runs out of enzymes, antioxidants, phytonutrients, probiotics, prebiotics and other essential micronutrients resulting in a reduction of both the function and the protection of the body organs. Consequently degenerative disease is initiated.

In the developed world, we have moved away from raw food towards processed foods of enormous variety for ourselves and our pets. We are largely loathe to return to the perceived inconvenience of raw food.

A new era of nutritional supplements has evolved made from the raw food on which the animal is designed to live, being bio-available, bio-active and rich in active micronutrients which work together synergistically, but do not work properly in isolation. In this way, the essential elements of raw food, most of which have not yet been identified, are provided without the inconvenience, when added to the animals' normal diet.

Since 1992, several medical trials have been completed on humans using the human version of this supplement (Juice Plus), with very positive results including:

- huge increases in antioxidant levels with concomitant decreases in lipid peroxides (a measure of cellular free radical damage) (Wise J A et al, Leeds A.R. et al)
- 66% reduction in DNA damage (Smith M J et al)
- enhanced immunity (Inserra P.F. et al)
- improved muscle to fat ratio (Ray M et al)
- reduced plasma homocysteine (instrumental in the pathogenesis of heart disease) (Samman S et al, Panuzio M.F. et al)
- a reduction in the vasoconstriction which normally follows a fatty meal (Plotnick G.D. et al).

Clinically, one of the notable improvements is in the health of the oral tissues, a trial on which is currently running at a prestigious dental school in UK.

The initial findings of this pilot study indicate that the micronutrient activity of food, its bio-availability and the synergistic actions of its components play an important role in the oral health of cats and dogs.

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