

Abstract

In this study, I performed an epidemiology investigation using pet insurance data for the purpose of preventive enlightenment, searched for the risk factor associated with foreign body ingestion in family dogs, and searched for the dog breast tumor early checkup marker as the progression prevention. Furthermore, in a past study, adiponectine was proved to be useful as an early checkup marker in a breast tumor.

256,144 0-12-year-old insured dogs were surveyed and performed the disease statistics by pet insurance data. The disease that was frequent in a dog was 23.0% of skin diseases, ear disease 15.4%, digestive organ disease 14.7%, ophthalmopathy 10.0%. The skin disease, the disease of the ear, the digestive organ disease showed high prevalence at all 0-12-year-old age. The disease of eyes and the tumor disease showed high prevalence of more than 10.0% at after 7 years old. Prevalence tended to increase the circulatory organ disease, the tumor disease with aging.

I performed a risk factor search to lead to the foreign body ingestion prevention by pet insurance data and questionnaire survey.

The factor that much foreign body ingestion occurred was 0-1 years old, a flat-coated retriever, a bernese mountain dog, a beagle, a french bulldog, RETRIEVER-group. The dog which dealt with sterility had high connection with the foreign body ingestion. In 13 temperaments to be considered to be action properties of the dog, a related thing with foreign body ingestion was suggested for "chasing" and "attachment ". For these risk factor candidates, performing preventive enlightenment with a concrete image, carrying out and measures every individual factor, inspection those effects, and carrying out again are important.

The prevalence of the tumor disease of the dog (0-10 years old) was 7.9%

in bitches 6.4% in male dogs. A bitch showed the ratio that was 1.5% higher than a male dog. In addition, increase in age-related prevalence was seen. After 6-7 years old in particular showed a tendency to increase that was more sudden than it past. The dog breed that showed the value that the prevalence of breast tumor was higher in than 0.7% of whole dog was Maltese dog 1.3%.

I measured mRNA expression of blood of the dog that became the operation adaptation of breast tumor and isolated tissue tumor-related gene p21, p53, erbB2, BRCA1 and BRCA2 for the purpose of searching for breast tumor marker. However, all genetic expression had a big individual difference, and the significant difference ($P < 0.05$) was not recognized between a malignancy of the illness.

65% (17/26) of dogs with mammary tumor (low APN group) showed significantly low plasma APN concentrations ($14.3 \pm 1.0 \mu\text{g/ml}$, mean \pm 95% C.I.) compared to normal control values ($30.9 \pm 10.6 \mu\text{g/ml}$). mRNA expression of AdipoR1 and AdipoR2 were detected in mammary tumor tissues of dogs, and mRNA expression of AdipoR1 was 2-4 times higher than that of AdipoR2. Decrease in circulating APN concentrations appears to be a risk factor for mammary tumor in dogs as for postmenopausal breast cancer in women.