Short Communication**A RARE CASE OF SPONTANEOUS HYPERPLASIA OF SEBACEOUS GLAND IN A BEAGLE DOG****Masaaki Okada**

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Neoplasms of canine sebaceous glands are common, but there have been only two reports of tumors of the sebaceous glands within the past few years.^{1,2} Recently, we observed a rare case of hyperplasia of the sebaceous glands in a Beagle dog. The dog was a female, 11 months old at the time of necropsy, belonging to a medium-dosage group of a subacute toxicity study. Drug induced changes were observed in each dosage group during the first week after administration was begun. Then, loose stool and vomiting were sporadically observed in each group including the control, but no other abnormal signs were noted. Gross observations revealed no remarkable changes, and histopathological examinations showed no pronounced changes in any organs and tissues except in the skin obtained from the abdominal mamma adjacent to a nipple. This specimen was fixed in 10% phosphate buffered formalin and embedded in paraffin. Thin sections were stained by hematoxylin and eosin (H.E), periodic acid-Schiff (PAS) reaction, colloidal iron, Alcian blue (pH 2.5), and several lipid stainings were done with different methods using frozen sections from fixed tissue.

The proliferative cells showed nodular growth in each lobule adjacent to the hair follicle in the dermis (Fig. 1). The cytoplasm was eosinophilic and abundant, and vacuoles were frequently observed therein (Fig. 2). Nuclei were round, nucleoli were obvious, and nucleoplasm was pale. The

cells were aggregated in honeycomb or other shapes. Mitosis was not noted. PAS-positive fine granules were frequently observed in the central area of nodules or lobules. Extracellular matrices were stained with Alcian blue and colloidal iron, and the fine granules in the cytoplasm were positive with either staining. The vacuoles appeared to be neutral fats, because of positive staining with Sudan III, Oil red O, and Sudan black B.

From these findings, this lesion was diagnosed as hyperplasia of the sebaceous gland.

Goldschmidt¹ reported the site of origin in 220 adenomas of the sebaceous glands as follows: eyelids 45.4%, head and neck 25.4%, forelimbs 10.9%, hindlimbs 7.8%, thorax 3.2%, and abdomen 7.3%. The majority of these neoplasms arose from the meibomian glands of the eyelids. The average age of animals with adenomas of the sebaceous glands reviewed by the same author was 9.9 years, with a range of 3~18 years.

On the other hand, Gaag² indicated that otitis externa, next to tumors and tumor-like lesions was the most common and problematic disease in dogs. Otitis externa is mainly a chronic proliferative inflammation characterized by hyperkeratinization, hyperplasia of the sebaceous and ceruminous glands, fibrosis, and infiltration of plasma cells, lymphocytes, and macrophages. In ear specimens of 106 dogs, the same investigators found otitis externa without tumor on 58 occasions. In 46 dogs, the tumors were diagnosed in 15 cases with otitis externa. The average age of the 58 dogs was 6.58 years old. In 46 dogs, the average age of 19 dogs diagnosed with mesenchymal tumor was 5

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Fig. 1. Proliferating cells showing nodular growth in each lobule adjacent to the hair follicle in the dermis. H.E., $\times 50$.

Fig. 2. Eosinophilic and abundant cytoplasm with vacuoles. H.E., $\times 100$

years old and the 27 dogs diagnosed as having epithelial tumor averaged 8.5 years of age.

Compared with these two reports, the case under study is much younger (11 months old), and the site of origin is the abdominal skin. From both points of view, this is a very rare case of canine hyperplasia of the sebaceous gland.

References

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