

White Ferrets, Deaf Ferrets?

Congenital sensorineural deafness (CSD) is an emerging but controversial issue in ferrets. As described in other species, it may be associated with white-marked coats, but the prevalence and inheritance of CSD is currently unknown. The objective of this study was to document the prevalence of CSD and its association with phenotypic markers in pet ferrets. Subjects were 152 European ferrets from owners and breeders. Brainstem auditory evoked response (BAER) tests were recorded under general anesthesia. Coat color and pattern, coat length (Angora trait), and premature graying trait were noted. Coat color was divided into coat without white markings, coat with white markings, and albino. Coats with white markings were then classified into 6 patterns (panda, American panda, blaze, silver, dark-eyed white, and mitt). Premature graying, often seen at 1–3 years, was determined with follow-up if possible.

Overall prevalence of deafness was 44/152 (29%), with 7% unilateral and 22% bilateral. There was no association between deafness and sex or Angora trait, but significant association between CSD and white patterned and premature graying coats. All panda, American panda, and blaze ferrets were deaf, while all ferrets without white markings had intact hearing.

Color-related deafness in animals is often linked to failure of migration or maturation, premature death, or dysfunction of neural crest melanocytes in the inner ear. Future studies into the inheritance pattern of CSD in ferrets are warranted, especially as the white patterns have gained popularity. Breeders should be made aware of and attempt to reduce this emerging defect.

Commentary

Studies that evaluate and characterize genetically based or hereditary disorders are clinically and medically beneficial to the health of exotic pets, as shown in this excellent paper. Anyone who treats exotic patients knows the understanding of breed predisposition to medical syndromes is vitally important and helpful in their medical care. Bringing awareness to congenital sensorineural deafness and the coat color patterns of ferrets most likely to have this condition is important for owners, breeders, and veterinarians alike. More importantly, it helps veterinarians recognize and diagnose the condition and hopefully helps breeders make better choices in breeding stock. We have failed many types of pets because of our desire to have certain coat colors or patterns over individual health, and studies like this provide excellent insight into how we can control and even prevent hereditary diseases.—*Anthony A. Pilny, DVM, DABVP*

Source

Prevalence of deafness and association with coat variations in client-owned ferrets. Piazza S, Abitbol M, Gnirs K, et al. JAVMA 244:1047-1052, 2014.

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