

Color-dilution Alopecia

(COLOR-MUTANT ALOPECIA, BLUE DOBERMAN SYNDROME)

DEFINITION

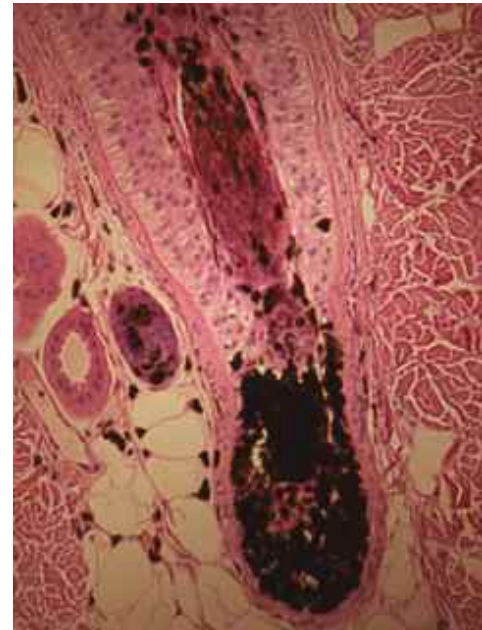
Color-dilution alopecia is an inherited disorder of color-diluted dogs characterized by hair loss developing in the areas of the dilute-colored hair.

ETIOLOGY AND PATHOGENESIS

Affected animals have many large, irregularly shaped pigment granules in the basal keratinocytes, hair matrix cells, and the hair shafts. It has been suggested that hair matrix cells are affected by the cytotoxic effects of pigment precursors, which results in cessation of hair growth and, eventually, failure of hair growth. The extensive pigment clumping in hair makes it weak and leads to fragility and breaking of hair shafts at these sites. Cats with diluted coats do not seem to be affected by colour dilution hair loss.

CLINICAL FEATURES

Color-dilution hair loss has been diagnosed mainly in Blue Doberman Pinschers leading to the early name of Blue Doberman syndrome. However, the syndrome has also been diagnosed in other breeds with blue color dilution, including the Dachshund, Great Dane, Whippet, Italian Greyhound, Chow Chow, Standard Poodle, Yorkshire Terrier, Miniature Pinscher, Chihuahua, Bernese Mountain Dog, Shetland Sheepdog, Schipperke, Silky Terrier, Boston Terrier, Saluki, Newfoundland, German Shepherd's and mixed-breed dogs. The syndrome has also been diagnosed in the Fawn Doberman Pinscher, Fawn Irish Setter, and Red Doberman Pinscher. The syndrome appears in approximately 93% of Blue and 83% of Fawn Doberman Pinschers. Onset generally occurs in animals 4 months to 3 years of age. However, it has developed in some animals as late as 6 years of age. Affected animals initially manifest a gradual onset of a dull, dry, brittle, poor-quality coat with fractured hair. As the condition progresses, a moth-eaten partial hair loss develops, which may continue to worsen until there is total hair loss of dilute-



colored hair. Bumps can develop in the skin where there are hair follicles. These and may advance to black-head formation or secondary bacterial infection of the hair follicles. As the condition becomes chronic, the affected skin can become black and greasy. The severity of the syndrome varies with lighter-colored animals developing the most extensive lesions. Lesions will be limited to the dilute coloured parts of the coat in multi-coloured animals.

DIFFERENTIAL DIAGNOSES

- Hyperadrenocorticism
- Hypothyroidism
- Sex hormone dermatoses
- Follicular dysplasia
- Cyclical flank alopecia
- Acquired pattern alopecia
- Demodectic mange
- Ringworm

DIAGNOSTIC TESTS

Clinical examination will raise suspicion of the disorder. Histopathologic examination of biopsy samples will confirm the diagnosis.

MANAGEMENT

There is no specific treatment that will alter the course of the syndrome. In some animals, weekly bathing with benzoyl peroxide shampoo to reduce comedo formation and seborrhea may be beneficial. Harsh, drying shampoos can accelerate coat damage. Bathing with shampoos containing phytosphingosine is also beneficial. Systemic antibiotics would be appropriate if a secondary bacterial infection is present.

KEY POINTS

- Diagnosis depends on histopathologic examination.
- There is no treatment that will alter the coat changes