

Color Dilution Alopecia

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Color dilution alopecia (CDA) is also referred to as color mutant alopecia and Blue doberman syndrome. It is an inherited disorder of color-diluted (i.e. silver, blue or red) dogs characterized by non-pruritic hair loss. The reason CDA develops is that the pigment (melanin) granules in the hair clump together abnormally. This clumping feature results in the dilute coat color, but it also weakens the hair. If the melanin clumps are too large, they lead to fragile hair shafts that break and do not easily re-grow.

CDA has been diagnosed mainly in Blue doberman pinschers, but it has also been diagnosed in other breeds with blue color dilution, such as silver Labradors. Onset of clinical signs generally occurs in dogs that are four months to three years of age. However, it has developed in some dogs as old as six years of age. Affected animals gradually develop a dull, dry, brittle, poor-quality coat with fractured hair. As the condition progresses, a moth-eaten partial alopecia develops, which may continue to worsen until there is total alopecia of dilute-colored hair. Follicular papules often develop and may advance to comedone formation or secondary bacterial folliculitis. As the condition becomes chronic, the affected skin can become hyperpigmented and seborrheic. The severity of the syndrome varies. Areas of the body where repeated friction and pressure occur (such as from a harness or collar) are often affected first. Lesions will be limited to the dilute-colored parts of the coat in multi-colored animals.

Differential diagnoses for CDA include: hypothyroidism and other endocrine dermatoses, cyclic flank alopecia, acquired pattern alopecia, demodicosis and dermatophytosis.

Diagnosing CDA starts with a physical exam and ruling out other possible causes of non-pruritic alopecia (such as endocrine dermatoses, demodicosis and dermatophytosis). Trichogram will reveal uneven distribution and clumping of melanin granules that may cause distortion of the hair shaft. The diagnosis of CDA is confirmed with a skin biopsy. The area biopsied should include affected hairs.

There is no specific treatment that will alter the course of CDA. Harsh, drying shampoos can accelerate coat damage, however. Gentle bathing with antimicrobial and moisturizing products should be tailored to the needs of each individual case. High-quality diets and essential fatty acids may also be helpful.