FOCUS Alopecia & Hyperestrogenism in Dogs

Alopecia, a common complaint in veterinary medicine, is often classified as inflammatory or noninflammatory. Noninflammatory alopecia may result from abnormal hair growth (eg, congenital alopecia) or hair cycle arrest (eg, endocrine disturbances, alopecia X) and tends to result in a diffuse and symmetrical distribution. Inflammatory alopecia (eg, demodicosis, pyoderma, pemphigus foliaceus) typically has well-demarcated or patchy distribution.

This report describes a case series of 6 unrelated dogs from 3 households that presented with progressive noninflammatory alopecia secondary to hyperestrogenism following transdermal exposure to their owners' topical hormone replacement therapy (THRT). Hyperestrogenism is most commonly the result of ovarian cysts, granulosa cell tumors, Sertoli cell tumors, or diethylstilbestrol administered for urethral sphincter incompetence. The associated alopecia typically is bilaterally symmetrical, progressing from the perineal and inguinal regions to the flanks, abdomen, thorax, and limbs.

Signs of feminization were present in 5 of 6 dogs. Average onset to signs was 5.5 months after the owners started THRT with alopecia severity correlating with exposure length. Hyperestrogenism diagnosis was based on patient history, clinical signs, diagnostic test results incompatible with more common causes of alopecia, histopathology, baseline serum sex hormone levels (most commonly elevated estradiol and progesterone levels). All dogs had complete resolution of clinical signs by 5.5 months after discontinuation of THRT.

Commentary

Hair loss as a dog owner's primary complaint can be frustrating to diagnose and treat. If inflammation is present, differentials include parasitic, infectious, and allergic causes; most veterinarians frequently treat such cases. When inflammation is absent, the diagnostic course is less apparent. This case series provides excellent detail on the diagnostic process for noninflammatory alopecia in dogs. It illustrates the logic that leads to questioning owners on the possibility of exogenous hormones. Although a team might not remember to ask about that particular medication in every case of noninflammatory alopecia, the answer can be found if a logical series of tests is performed.
—Elizabeth Layne, DVM, Resident in Dermatology (University of Wisconsin)

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Source

Berger DJ, Lewis TP, Schick AE, Miller RI, Loeffler DG. Canine alopecia secondary to human topical hormone replacement therapy in six dogs. *JAAHA*. 2015;51(2):136-142.

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