# FIVE DOGS WITH CLINICAL AND HISTOPATHOLOGICAL FEATURES SIMILAR TO CANINE RECURRENT FLANK ALOPECIA.

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#### INTRODUCTION

Canine recurrent flank alopecia (CRFA), also known as cyclic flank alopecia or seasonal flank alopecia, was described approximately 20 years ago. Clinically, it is mostly characterized by episodes of truncal bilateral symmetric, nonpruritic, nonscarring, noninflammatory, well demarcated and hyperpigmented alopecia, with spontaneous hair regrowth. Generally, the first alopecic episode occurs at 4 years old, usually during the winter months in the northern hemispheric countries. Rarely, in conjunction with the thoracolumbar presentation, the alopecia may affect the bridge of the nose, the base of the ears and the base of the tail and/or the perineum. The CRFA has been reported in many breeds. However, the most common breeds affected are Boxers, Airedale terriers and English bulldogs. No association with gender or reproductive status has been reported. The etiopathogenesis is still unknown, although the condition has been associated with lack of melatonin and/or prolactin, both photo-dependent hormones. The disease has been reported in countries located north (45°) or south (40°) parallels. In addition to that, there is a case reported in the Southern Brazil (30° south parallel).

### CLINICAL SIGNS AND SIGNALMENT.

Five females dogs (4 intact and 1 spayed; two Boxers, two English bulldogs and one French bulldog) all born in Costa Rica, were presented with bilateral symmetrical flank, no pruritic hyperpigregrowth (Fig. 1 and 2). The ages ranged from 1.2 to 12 years. Three of them were between 2.6 and 4 years old respectively. In one patient the alopecic episodes started when she was 3-years-old and lasted for 5 years (the last follow-up). Two of



Fig.1. Showing a focal area with alopecia and hyperpigmentation. Inset (two post biopsies sites are seen).

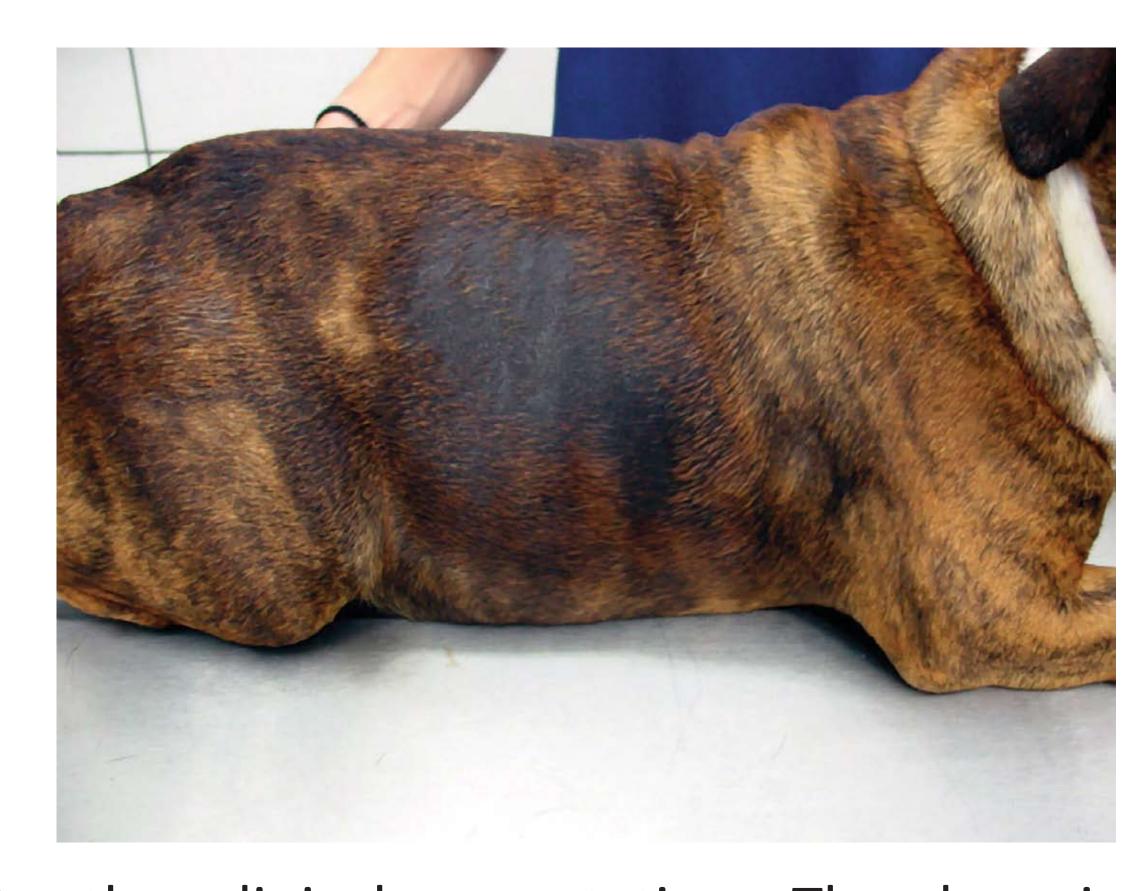


Fig.2. Another clinical presentation. The alopecia and pigmentation is more diffuse.

the four intact females were later on spayed, showing initially clinical improvement, but then mented alopecia and episodes of spontaneous followed by recurrent episodes of alopecia. All alopecic events occurred during the rainy season days (less sunlight). Furthermore, in one dog the blood count, serum chemistry and T-4 free were with normal parameters. In another patient, the estrogen level was in the normal limits.

#### PATHOLOGICAL FINDINGS.

processed routinely, embedded in paraffin and sectioned at approximately a 5 µm thickness. Sections were stained with Hematoxylin and Eosin (H.E.).

Microscopically, the epidermis had a moderate hyperpigmentation with hyperkeratosis. The dermis showed no inflammatory reaction (Fig.3).

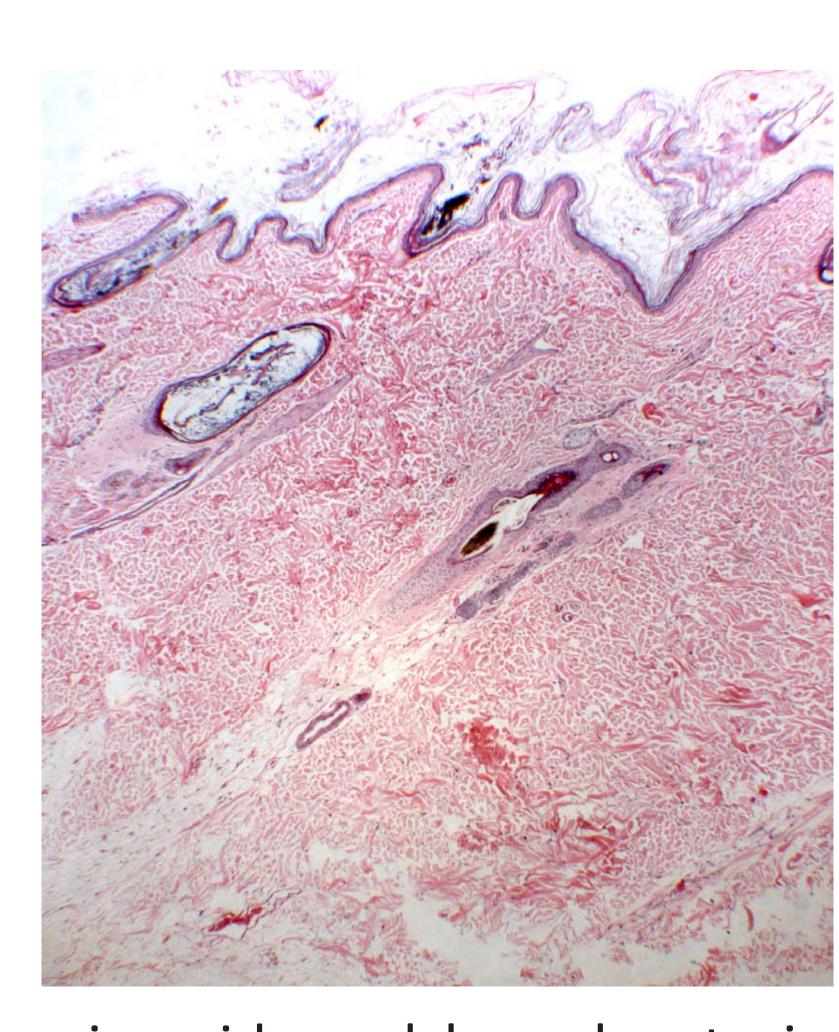


Fig. 3. There is epidermal hyperkeratosis. In the dermis, there is noninflammatory reaction with follicular and adnexal glands atrophy. H.E. Stain.

There were different stages of infundibular hyperkeratosis with foot-like or pear-shaped configuration (fig.4).

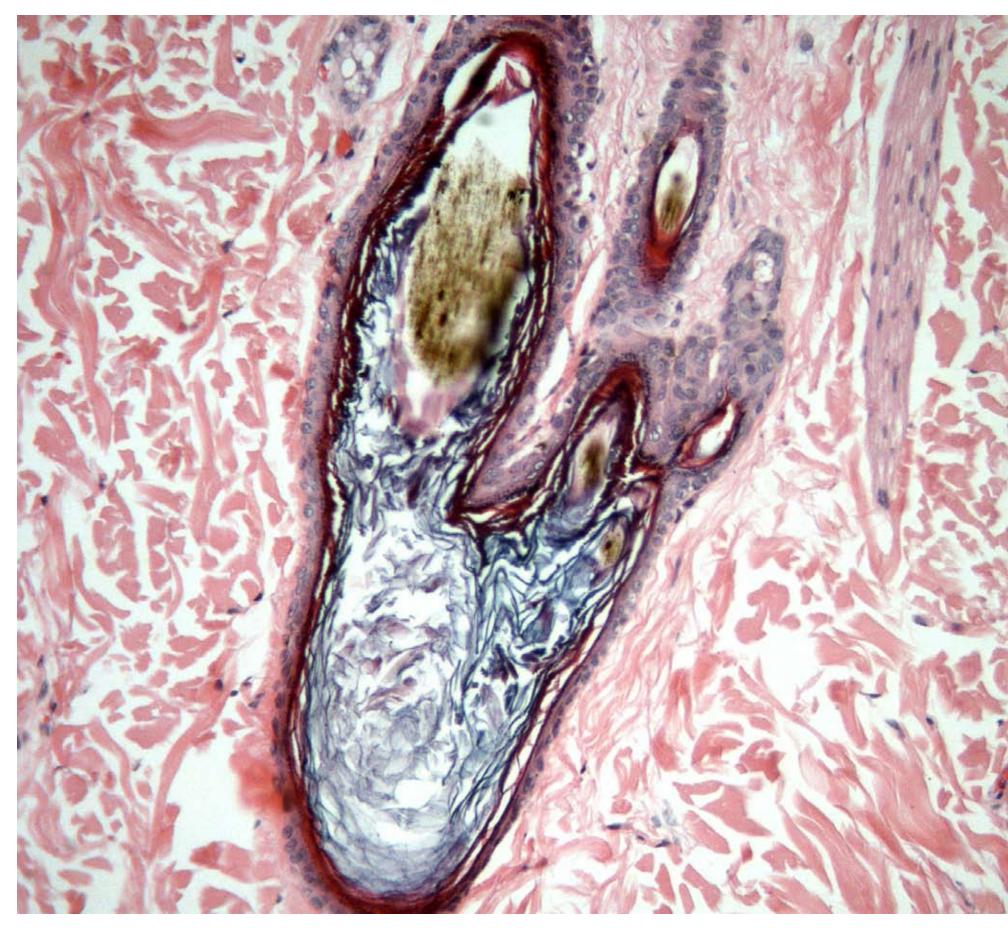


Fig.4. There is a characteristic follicular infundibulum with the pear shape aspect. H.E. Stain.

Moreover, the hair follicles showed abnormal In all dogs several skin biopsies were taken and stages of their hair cycle, with predominant telogen follicles. Besides, the sebaceous glands showed atrophy (Fig.5).

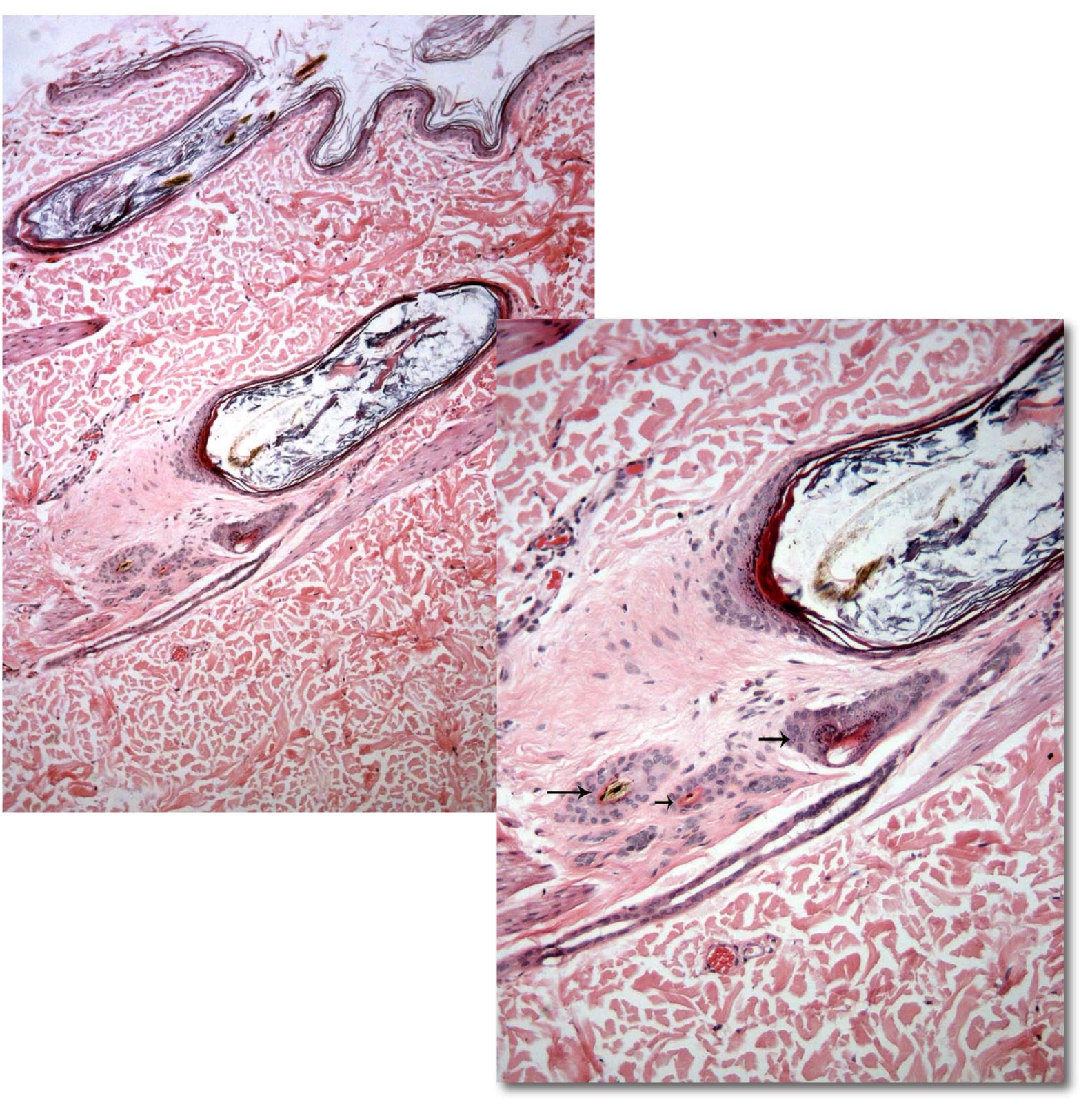


Fig.5. A comedone and infundibular hyperkeratosis is present. Inset. Besides, there are three atrophic follicles (arrows). H.E. Stain.

## DISCUSSION

CRFA has been reported in different breeds. However, similar to our cases, the Boxer and English Bulldogs are among the most reported. Moreover, dogs of either sex can be affected. Nevertheless, all our five cases occurred in females four intact and one spayed at the first alopecic episode. The clinical signs observed in these five patients are identical to the described in cases of CRFA. Due to financial constraints, there was no possibility to measure the serum hormones. However, in one dog the estrogen and the T-4 free in another were within normal values. Des-

pite of there are not pathognomonic microscopic findings in this CRFA; the histopathological features found in these five dogs were very similar to the described in the literature to this noninflammatory recurrent flank alopecia.

Although, the etiopathogenesis is still unknown, the condition has been related with lack of melatonin and/or prolactin, both photo-dependent hormones. In fact, all the cases reported are from countries with the four seasons, specially the ones located around or north of the 45° parallel. On the contrary, Costa Rica is located in north 10° parallel, with only two seasons (dry and wet). Interestingly, all the cases occurred during the raining season (shorter daylight period). These appear to be the first serial cases of canine recurrent flank alopecia reported in Latin America and the Caribbean islands.

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