

Miscellaneous Skin Diseases

Sterile Eosinophilic Folliculitis and Furunculosis

Anagen Defluxion

Other Disorders

- Acral Lick Dermatitis
- Eosinophilic Granuloma
- Self-Destructive Behavior
- Sterile Panniculitis
- Telogen Defluxion
- Vitiligo
- Carotenoderma

Sterile Eosinophilic Folliculitis and Furunculosis

Features

Sterile eosinophilic folliculitis and furunculosis is a rare, idiopathic, cosmopolitan disorder. It occurs at any time of the year. There are no apparent breed or sex predilections, and adults are usually affected.

Lesions occur more or less symmetrically, and the head, neck, and trunk are commonly affected (Figs. 1.9-1 to 1.9-4). Early papules enlarge to plaques, and become alopecic and crusted. Some lesions exhibit central healing; others ooze. Lesions are neither pruritic nor painful, and affected animals are otherwise healthy. Only one animal in a herd is affected.

Differential Diagnosis

Dermatophytosis, dermatophilosis, staphylococcal folliculitis, demodicosis, and stephanofilariasis.

Diagnosis

- 1) Microscopy (direct smears): Predominantly eosinophils; no phagocytosed bacteria (Fig. 1.9-5).
- 2) Culture: Sterile.
- 3) Dermatohistopathology: Eosinophilic luminal folliculitis with or without eosinophilic furunculosis.

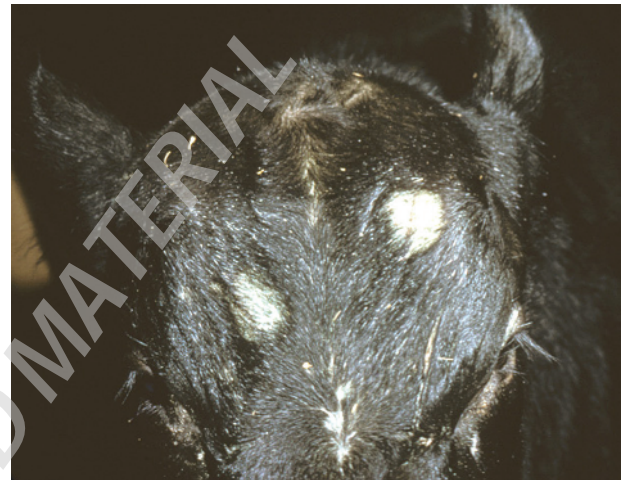


Figure 1.9-1 Sterile eosinophilic folliculitis and furunculosis. Annular areas of alopecia and gray crusting on the head.

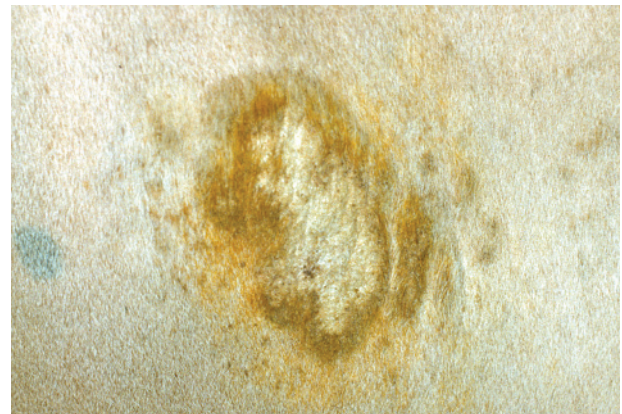


Figure 1.9-2 Sterile eosinophilic folliculitis and furunculosis. Central thick crust with numerous peripheral tufted and crusted papules over lateral thorax.

Anagen Defluxion

Features

Anagen defluxion (“anagen effluvium”) is uncommon and cosmopolitan. Various severe stressors (e.g., infectious

diseases, metabolic diseases, and high fevers) result in temporary growth defects in hair shafts. Calves are most commonly affected, and there are no apparent breed or sex predilections.



Figure 1.9-3 Sterile eosinophilic folliculitis and furunculosis. Widespread erythematous papules and plaques. *Source:* Courtesy of J. Gourreau.

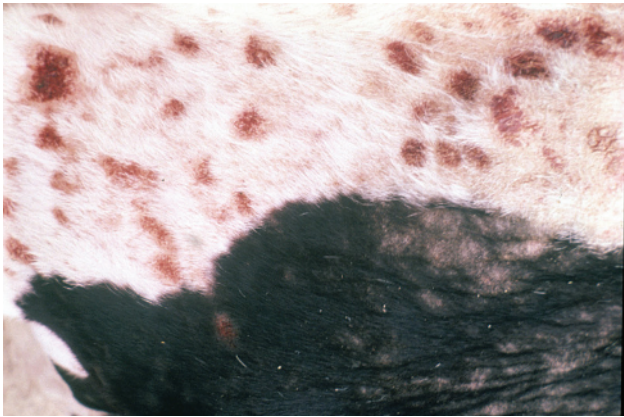


Figure 1.9-4 Sterile eosinophilic folliculitis and furunculosis. Numerous erythematous oozing, crusted papules, and plaques over shoulder area. *Source:* Courtesy of J. Gourreau.

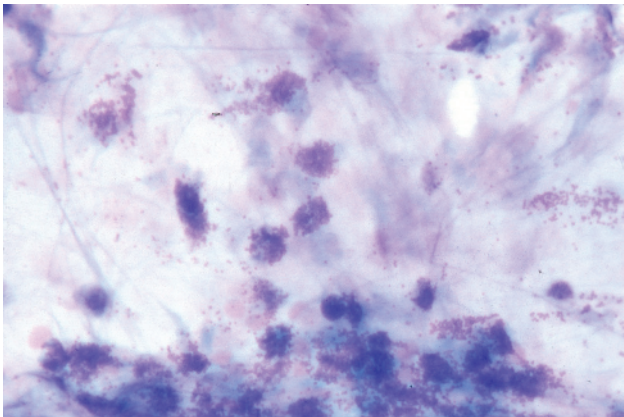


Figure 1.9-5 Sterile eosinophilic folliculitis and furunculosis. Direct smear. Numerous eosinophils.

Hair loss occurs suddenly, within 7 to 10 days of the stressor. The hair loss may be regional, multifocal, or fairly generalized, and it is more or less bilaterally symmetric (Figs. 1.9-6 to 1.9-8). Skin in affected areas appears normal unless secondarily inflamed by trauma, contact dermatitis, or photodermatitis. Pruritus and pain are absent.



Figure 1.9-6 Anagen defluxion. Alopecia on leg beginning several days after the onset of fever and pneumonia.



Figure 1.9-7 Anagen defluxion. Widespread alopecia associated with pneumonia.



Figure 1.9-8 Close-up of Figure 1.9-7. Note alopecic tail.

Differential Diagnosis

Hereditary hypotrichoses, follicular dysplasia, vitamin C–responsive dermatosis, and alopecia areata.

Diagnosis

- 1) Microscopy (plucked hairs in mineral oil): Hair shaft diameters irregularly narrowed and deformed.
- 2) Dermatohistopathology: Apoptosis of hair matrix keratinocytes with or without dysplastic hair shafts.

Other Disorders

Table 1.9-1 Miscellaneous Skin Disorders

Acral lick dermatitis (Fig. 1.9-9)	Very rare; self-induced; ulcerated plaque over shoulder; preceded successive calvings by 2 to 3 weeks; dermatohistopathology
Eosinophilic granuloma	Very rare; adult dairy cattle; summer onset; multiple; widespread nodules; dermatohistopathology
Self-destructive behavior (Figs. 1.9-10 and 1.9-11)	Rare; Holsteins; especially first-calf heifers; severe udder edema precedes intense licking of skin between teats or base of teats; results in ulceration and necrosis
Sterile panniculitis	Very rare; one or multiple subcutaneous nodules and/or abscesses; especially neck, trunk, and proximal limbs; culture (sterile) and dermatohistopathology
Telogen defluxion (Fig. 1.9-12)	Rare; 1 to 3 months after various stressors; regional or widespread, more or less bilaterally symmetric hair loss; skin normal; hair pluck
Vitiligo (Fig. 1.9-13)	Rare; cosmopolitan; probably hereditary (especially Holstein-Friesian, Hereford, Japanese Black, Bali, and Madura); young animals; more or less symmetrical depigmentation of skin (leukoderma) and/or hairs (leukotrichia); especially face and neck; dermatohistopathology
Carotenoderma (Figs. 1.9-14 to 1.9-16)	Very rare; yellow-orange pigmentation of skin (NOT sclera) and increased serum beta-carotene levels; associated with prolonged and excessive consumption of beta-carotene-rich foods (e.g., carrots, squash, sweet potatoes, and dandelions); animals are otherwise healthy



Figure 1.9-9 Acral lick dermatitis. Oval self-induced ulcerated plaque on shoulder. *Source:* Courtesy of I. Yeruham.



Figure 1.9-10 Self-destructive behavior. Self-induced ulceration of teat and udder. *Source:* Courtesy of I. Yeruham.



Figure 1.9-11 Self-destructive behavior. Self-induced teat ulceration. *Source:* Courtesy of I. Yeruham.



Figure 1.9-12 Telogen defluxion. Widespread hypotrichosis 3 months after an undiagnosed illness and multiple drug administration.



Figure 1.9-13 Vitiligo. Linear streak of leukotrichia on neck.



Figure 1.9-14 Carotenoderma. Yellow-orange discoloration of skin around right eye. Note that the sclera is unaffected.



Figure 1.9-15 Carotenoderma. Same cow as in Figure 1.9-14. Note yellow-orange color of skin around left eye, but normal sclera.



Figure 1.9-16 Carotenoderma. Same cow as in Figures 1.9-14 and 1.9-15. Note yellow-orange discoloration of skin.

References

Radostits, O.M., *et al.* (2007) *Veterinary Medicine. A Textbook of the Diseases of Cattle, Horses, Sheep, Pigs and Goats*, 10th ed. Saunders Elsevier, New York, NY.

Smith, B.P. (2015) *Large Animal Internal Medicine*, 5th ed. Elsevier Mosby, St. Louis, MO.